

Alaska Department of Fish and Game

Staff Comments

Central/Southwest Region Proposals

Alaska Board of Game Meeting

Dillingham, Alaska

February 16-23, 2018



The following staff comments were prepared by the Alaska Department of Fish and Game for use at the Alaska Board of Game meeting, February 16-23, 2018 in Dillingham, Alaska, and are prepared to assist the public and board. The stated staff comments should be considered preliminary and subject to change, if or when new information becomes available. Final department positions will be formulated after review of written and oral testimony presented to the board.

PROPOSAL 70 – 5 AAC 92.530(7)(C)(i)(2). Management Areas. Remove the Bettles Winter Trail travel exception for public use within the Dalton Highway Corridor Management Area (DHCMA).

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? The proposal will remove the Bettles Winter Trail as a designated road within the DHCMA. This will prohibit the use of motorized vehicles for hunting.

WHAT ARE THE CURRENT REGULATIONS? No motorized vehicle may be used to transport hunters, hunting gear, or parts of game, within the Dalton Highway Corridor Management Area (DHCMA), except that licensed highway vehicles may be used on designated roads, including the Bettles Winter Trail, during periods when the Bureau of Land Management and the city of Bettles announce that the trail is open for winter travel.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The effect of this proposal will be to remove the Bettles Winter Trail as a designated road that provides egress from the DHCMA into Units 24A and 24B for hunting purposes.

BACKGROUND: The Bettles Winter Trail is currently the only designated road that extends beyond the 5-mile corridor of the DHCMA. This proposal would remove the Bettles Winter Trail as a motorized travel exception from the DHCMA regulation.

In 2016, when this proposal was submitted, the department determined that it was important to provide the Board of Game with an opportunity to make changes to the DHCMA regulation that may have become necessary based on likely actions taken by the Bureau of Land Management (BLM) in the affected area. However, since that time, it is our understanding that the BLM's progress is essentially stalled on the Bettles Winter Trail Environmental Assessment which would have affected the legality of State regulations designating the Bettles Winter Trail as a designated road from which licensed highway vehicles could access hunting opportunities outside the DHCMA. At this time we have no clear indication of when or if proposal 70 is needed.

At that time, the Bureau of Land Management (BLM) was soliciting comments for an Environmental Assessment of permitted use of the Bettles Winter Trail. The decision was originally expected by June 2016, which was after the deadline for proposals for the Interior-Northeast Arctic Board of Game meeting in February 2017. The BLM is also currently assessing the Bettles Winter Trail in their Central Yukon Management Plan, but the timeline on that plan appears to also be protracted.

At the time this proposal was submitted, it appeared that if the Bettles Winter Trail permit were to be approved by BLM in its current form, vehicle access would have been restricted to only commercial fuel and supply trucks or Bettles residents. Therefore, the existing regulation which designates the Bettles Winter Trail as a legal motorized travel exception within the DHCMA would have misled hunters and possibly subject them to citations if the road was closed to public use. The department submitted comments to the BLM recommending that any alternative carried forward in the EA should include a provision for access for all members of the public to fish and wildlife resources on public lands. The right-of-way authorization for winter use should

allow for public access on BLM land, including those traveling to the communities of Bettles and Evansville.

DEPARTMENT COMMENTS: The department recommends **TAKE NO ACTION** on this proposal. If it is necessary, the department will generate a new proposal after the BLM finalizes the Environmental Assessment and Record of Decision regarding the Bettles Road. In addition, other access issues along the DHCMA have recently come to our attention. At this time we are still investigating the full scope of access issues that need to be clarified along the entire corridor. The department will provide a new proposal to the board in 2020 if issues along the full length of the DHCMA, including the Bettles Winter Trail, require board action.

COST ANALYSIS: Adoption of this proposal would not result in additional costs for the department.

PROPOSAL 71 – 5 AAC 92.080. Unlawful methods of taking game; exceptions, and 92.085. Unlawful methods of taking big game; exceptions. Allow the use of crossbows in restricted-weapons hunts.

PROPOSED BY: Howard Delo

WHAT WOULD THE PROPOSAL DO? Allow crossbows to be used in special management hunts that are weapons-restricted hunts (using muzzleloader, shotgun, or bow and arrow) and while hunting in specific game management areas or state refuges that have weapons-restricted hunts (using muzzleloader, shotgun, or bow and arrow).

WHAT ARE THE CURRENT REGULATIONS?

5 AAC 92.530. Management areas:

- (18) the Palmer-Wasilla Management Area:
 - (A) the area consists of that portion of Unit 14(A) bounded by a line beginning at the intersection of the George Parks Highway and the Glenn Highway, then east and north along the Glenn Highway to the Palmer Fishhook Road, then west and north along the Palmer Fishhook Road to the Faulk Road intersection, then west along the road and section line to Tex Al Drive and along Tex Al Drive to the Wasilla Fishhook Road, then south along the Wasilla Fishhook Road to Welch Road, then west along Welch Road to the south bank of the Little Susitna River, then west along the south bank of the Little Susitna River to the bridge at North Shushana Drive, then south along North Shushana Drive to Shrock Road, then west along Shrock Road to Church Road, then south along Church Road to the George Parks Highway, then west along the George Parks Highway to Vine Road, then south along Vine Road to Knik Goose Bay Road, then north along Knik Goose Bay Road to Fairview Loop Road, then south and east along Fairview Loop Road to the George Parks Highway, then east along the George Parks Highway to the intersection with the Glenn Highway;
 - (B) the area is closed to hunting except that

- (i) big game may be taken by muzzleloader, shotguns with slugs, and bow and arrow only;
- (ii) small game, deleterious exotic wildlife, and fur animals may be taken by muzzleloader, shotgun, air rifle, falconry, and bow and arrow only;
- (iii) waterfowl on Finger Lake may be taken by falconry, and bow and flu-flu arrow only;
- (iv) fur animals and furbearers taken under a trapping license by methods other than by trapping or snaring may be taken by muzzleloader, shotgun, air rifle, falconry, or bow and arrow only;

Chapter 85, hunting seasons and bag limits (in areas not listed above).

- **Unit 14A and Unit 14B targeted moose hunt (AM415).** Season may be announced. One moose by shotgun or bow and arrow only. The primary objective of this targeted hunt is to reduce moose-vehicle collisions and to allow resident hunters to selectively harvest moose that pose a threat to public safety or are likely to die as a result of an injury. The method of take is limited to specific weapons that do not have long range trajectories.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If the proposal were adopted, crossbows would be allowed as a fourth option for special management hunts that are weapons-restricted hunts using muzzleloader, shotgun, or bow and arrow. Crossbows would also be allowed as a fourth option while hunting in specific game management areas or state refuges that have weapons restrictions to use either a muzzleloader, shotgun, or bow and arrow.

BACKGROUND: The primary objective of a targeted hunt is to reduce animal-vehicle collisions and allow members of the public to selectively harvest game species that pose a threat to public safety or are likely to die as a result of an injury. Targeted hunts occur near populated areas (AM415 [Palmer], AM550 [Soldotna], and AM751 [Fairbanks]) and so the method of take is limited to specific weapons that don't have long-range trajectories.

The minimum draw weight requirements for bow and arrow are 40 or 50 pounds, depending on the species hunted. Technology has improved archery equipment so that it is much easier to reach the minimum draw weights required to hunt big game in Alaska.

A crossbow's effective shooting range is 30–40 yards, similar to bow and arrow, but a crossbow uses a cocking device that cocks the bow and holds it in the cocked position until the hunter pulls the trigger. Crossbows and bows deliver similar kinetic energy to the target: A crossbow's bolt travels approximately 300 feet per second (fps) with a 420-grain bolt, and generates 86.78 foot-pounds of kinetic energy, while a compound bow shooting a 350-grain arrow travelling 335 fps generates 87.24 foot-pounds of energy.

Muzzleloader ballistics vary greatly depending on the kind and amount of powder used, in addition to bullet weight. A typical .50 caliber muzzleloader shoots a 250 grain sabot, which travels at 2,197 fps, delivering 2,680 foot-pounds of energy at 100 yards. At 200 yards the sabot is almost 36 inches low and delivers 1,180 foot-pounds of energy. For comparison, a .308 caliber

modern rifle with a 110 grain bullet has muzzle velocity of 3,165 fps and delivers 1,956 foot-pounds at 100 yards. At 200 yards it delivers 1,551 foot-pounds of energy, dropping only 1.8 inches.

Beginning in 2018 the department will be implementing a crossbow education program.

DEPARTMENT COMMENTS: The department is **NEUTRAL** regarding the use of crossbows as a legal method of take in weapon-restricted hunts. This proposal is allocative in nature and does not address biological concerns.

COST ANALYSIS: Approval of this proposal is not expected to result in additional costs to the department.

PROPOSAL 72 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Establish archery-only registration hunts for moose in Units 9, 11, 13, 14A, 14B, 16 and 17.

PROPOSED BY: Alaska Bowhunters Association

WHAT WOULD THE PROPOSAL DO? Establish a seven day archery-only moose season in any Unit of 9, 11, 13, 14A, 14B, 16 or 17 that is open to a general season moose hunt immediately following the close of the general season. The bag limit would remain one bull moose legal under existing general harvest regulations.

WHAT ARE THE CURRENT REGULATIONS?

Unit 9

- There is currently no general season moose hunt in Unit 9.
- Registration moose hunts in Unit 9 are for either one bull moose or one antlered bull with spike-fork antlers, or 50-inches antlers, or four or more brow tines on at least one side.
- There is no archery-specific hunt for moose in Unit 9.

Unit 11

- The general season hunting opportunity occurs from August 20–September 20 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or four or more brow tines on at least one side.
- There is no archery-specific hunt for moose in Unit 11.

Unit 13

- The general season hunting opportunity occurs from September 1–September 20 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or three or more brow tines on at least one side.
- There is no archery-specific hunt for moose in Unit 13.

Unit 14A & B

- The current archery season in Unit 14A and 14B is August 10–17 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or three or more brow tines on at least one side.
- The general season hunting opportunity occurs from August 25–September 25 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or three or more brow tines on at least one side.
- Presently, there is no late season resident archery hunt for moose in Units 14A and 14B.

Unit 16

- The current archery season in Unit 16A is August 10–17 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or three or more brow tines on at least one side.
- The general season hunting opportunity in Unit 16 occurs from August 20–September 25 with a bag limit of one bull moose with spike-fork antlers, or 50-inch antlers, or three or more brow tines on at least one side.
- There is no archery-only moose season in Unit 16B.

Unit 17

- The general season moose hunting opportunity is September 1–15 in Unit 17A, 17B, and 17C with a bag limit of one bull with spike-fork antlers, or 50-inch antlers, or three or more brow tines.
- In 17B remainder the general season opportunity is from September 5–15 with a bag limit of bull moose with spike-fork antlers, or 50-inch antlers, or four or more brow tines on at least one side and nonresident moose hunter orientation is required.
- There is no archery-only moose season in Unit 17.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A late-season archery only hunt for bull moose would provide an additional opportunity for resident bow hunters to harvest a moose outside existing moose hunting seasons. Success rates are typically higher during the proposed time period compared to earlier in the fall due to peak rutting activity. Therefore, creating a new seven day archery season in all of Region IV would result in additional harvest that could be significant, especially in easily-accessed areas such as along roads and trails.

In some of these areas, bull:cow ratio estimates are currently near objectives (Table 72-1). As a result, if a region-wide, seven day archery season is adopted, the season length or bag limit (e.g. antler restriction) for the currently existing seasons may need to be restricted in order to maintain

objectives. Some of these moose populations (outside the Anchorage-Matsu-Kenai Nonsubsistence Area) have positive C&T findings, so if currently existing seasons were restricted, the board would need to consider if the new regulations still provide a reasonable opportunity for subsistence uses of moose.

Table 72-1. Current Central/Southwest Region moose bull-to-cow ratios by unit.

Unit	9C	9B	9E	11	13A	13B	13C	13D	13E	14A	14B	16A	16B
B:C	46	54	>50	41	27	34	34	89	40	21	30	33	51

(N bulls : 100 cows)

BACKGROUND: Estimates of bull:cow ratios and management objectives vary across Region IV. In some areas, the bull:cow ratios are near management objectives, and additional harvest, without a corresponding decrease in harvest during other hunts, could result in a failure to meet or achieve the established objectives.

For example, the current bull:cow ratio estimate along the road system in Unit 14A is 21 bulls:100 cows, which is at the lower threshold the fall objective of 20–30 bulls:100 cows. Conversely, bull:cow ratios are above management objectives in the Units 13D and 16B. As a result, archery seasons in these areas provide additional opportunity in some areas.

The August 10–17 season for archery hunters to hunt moose in Unit 14A was implemented in 1995. Proposals to change the season dates were submitted in 1997, 1999, 2001, 2007 and 2009, but were not adopted by the board. The average annual harvest during the archery season was 42 in Unit 14A and three in Unit 14B during the past five years (regulatory years 2012–2016).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose hunting opportunity to archery hunters, but **OPPOSES** any increase in the bull harvest in Units 13A, 14A, and 16A due to low bull ratios. If the proposal is adopted, this hunt would overlap the peak of the fall rut when bull moose are more vulnerable to harvest, which could increase hunter success and harvest.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 73 – 5 AAC 85.055. Hunting seasons and bag limits for Dall sheep. Establish archery-only registration hunts for Dall sheep in Units 9, 11, 13, 14A, 14B, 16 and 17.

PROPOSED BY: Alaska Bowhunters Association

WHAT WOULD THE PROPOSAL DO? This proposal would create an archery-only registration hunt for sheep in Units 9, 11, 13, 14A, 14B, 16 and 17, where general season hunts already exist, from August 1–9.

WHAT ARE THE CURRENT REGULATIONS? The current sheep hunting regulations can be found in 5 AAC 85.055 and in the 2017–2018 *Alaska Hunting Regulations*.

There is currently no season for Dall sheep in Unit 17. Opportunity for all residents and nonresidents in Units 9, 11, 13, 14A&B, and 16 are as follows:

- Resident and nonresident hunters may hunt using harvest tickets in most of the region during August 10–September 20.
- Nonresident hunters may harvest one full-curl ram every four years.
- Resident youth accompanied by an adult may hunt using harvest tickets during August 1–5. The bag limit counts against the accompanying adult. Hunter education is required for all participating youth.
- Beginning July 1, 2018 sheep taken by a nonresident personally accompanied by a resident relative will count as the bag limit of both the nonresident and the resident relative who accompanies the nonresident.

There is a positive customary and traditional finding for Dall sheep in Unit 11 with an amount necessary for subsistence of 60–75 sheep. The rest of the units either have a negative finding or no finding, and some are within a nonsubsistence area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal creates an archery-only sheep season in all harvest ticket hunt areas throughout Region IV with a season of August 1–9. The new season would overlap with the youth sheep hunt (August 1–5), which allows the use of firearms. The proponent requests that only conventional bows be allowed. This proposal is not likely to affect sheep populations because the current full-curl bag limit adequately guards against overharvest. Allocating additional hunting opportunity could increase sheep harvests, but it is difficult to predict how many resident hunters will participate in the hunt and how successful they will be.

BACKGROUND: The Central/Southwest Region has both full-curl and any-ram hunting opportunities. The full-curl bag limit provides maximum participation in sheep hunts and has not been linked to any negative effects on the sheep population or lamb production. Some sheep hunts have season dates and bag limits that provide a reasonable opportunity for success in harvesting a sheep for subsistence uses. All of these hunts are by harvest ticket or drawing permit.

Over half of the annual total sheep harvest occurs in the first 10 days of the season with the majority of this occurring in the first five days.

Table 73-1. Total Dall sheep ram harvest in the Central/Southwest Region by unit, 2012–2016.

Reg. Year	Unit 9	Unit 11	Unit 13	Unit 14	Unit 16	Total
2012	1	34	64	26	11	136
2013	0	45	58	29	11	143
2014	0	48	50	28	10	136
2015	0	47	62	35	16	160
2016	0	51	90	27	8	176
Total	1	225	324	145	56	751

Dall sheep populations throughout Region IV are considered stable with some variability. South Wrangell Mountains (Units 11 & 13) may be increasing while portions of the North Wrangell Mountains (Units 11, 12, & 13) and Tok Management Area (Units 12, 13C, & 20D) may be decreasing.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of sheep hunting opportunity between archers and hunters who use other methods of taking sheep. No biological concerns are addressed or created by this proposal because the requirement to harvest full-curl rams should prevent overharvest from affecting sustainability of sheep populations. If adopted, the record should show that the board has determined that the new regulations continue to provide a reasonable opportunity for success in customary and traditional uses of Dall sheep in Unit 11 where a positive customary and traditional use determination has been made.

COST ANALYSIS: Adoption of this proposal would not result in significant additional costs for the department.

PROPOSAL 74 – 5 AAC 85.055. Hunting seasons and bag limits for Dall sheep. Remove the nonresident bag limit restriction of one Dall sheep every four years in the Central/Southwest Region.

PROPOSED BY: Chris Harper

WHAT WOULD THE PROPOSAL DO? This proposal would allow nonresidents to harvest a Dall sheep ram more often than once every four years in Central/Southwest Region (Region IV).

WHAT ARE THE CURRENT REGULATIONS? The current sheep hunting regulations can be found in 5 AAC 85.055 and in the *2017–2018 Alaska Hunting Regulations*. There is currently a season for Dall sheep in Units 9, 11, 13, 14A&B, and 16.

- **Resident hunters:** All harvest ticket Dall sheep hunts in the region have a bag limit of one full-curl ram per regulatory year except that:
 - Drawing hunts in the Unit 14A (DS 170–DS195) and 13D-West (DS160) portions of the Chugach Mountains have bag limit of one ram.
 - The Tok Management Area (TMA) drawing permit hunts in Unit 13C (DS102 and DS103) have a bag limit of one ram every four regulatory years.
- **Nonresident hunters:** All harvest ticket hunts for Dall sheep in the region have a bag limit of one full-curl ram every four years except that:
 - Drawing hunts in the Unit14A (DS 270-DS290) and Unit 13D-West (DS260) portion of the Chugach Mountains allow the take of one ram every four years.

- Drawing hunts in the Unit 13D-East portion (DS265) of the Chugach Mountains allow the take of one full-curl every four years.
- The Tok Management Area (TMA) drawing permit hunts in Unit 13C (DS102 and DS103) have a bag limit of one ram every four regulatory years.

There is a positive customary and traditional finding for Dall sheep in Unit 11 with an amount necessary for subsistence of 60–75 sheep. The rest of the units either have a negative finding or no finding, and some are within a Nonsubsistence area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal affects successful nonresident sheep hunters who want to hunt sheep more frequently than once every four years. It allows nonresidents to apply for permits and take a sheep more frequently than allowed under the current bag limit (one sheep every four years). Some areas may experience an increase in harvest.

BACKGROUND: In 2016 at the statewide meeting the Board adopted the one sheep every four regulatory years bag limit for nonresidents. The Central/Southwest Region has both full-curl and any-ram hunting opportunities. The full-curl bag limit provides maximum participation in sheep hunts and has not been linked to any negative effects on the sheep population or lamb production.

In 2007 following a decline in sheep numbers and continued high hunting pressure in the Unit 13D-West and 14A portions of the Chugach Mountains, the board adopted regulations establishing a drawing hunt structure liberalizing the bag limits to include any-ram hunts and the allocation of harvest opportunity between residents and nonresidents. The drawing permit hunt structure was also designed to improve hunt quality by reducing “hunter crowding”. The any-ram opportunity provided by these drawing hunts is extremely popular because it removes the legal requirement of judging full curl before harvesting a sheep. The only sheep drawing that is more popular is in the Tok Management Area.

During 2012 through 2016, a total of 751 rams were harvested in the Central/Southwest Region – 272 were taken by nonresidents (Table 74-1). Statewide, 4.5% of successful nonresidents returned to Alaska to hunt sheep within four years of successfully harvesting a ram.

Table 74-1. Total resident (R) and nonresident (NR) Dall sheep ram harvest in the Central/Southwest Region by unit, RY2012–2016.

	Unit 9		Unit 11		Unit 13		Unit 14		Unit 16		
Reg. Year	R	NR	R	NR	R	NR	R	NR	R	NR	Total
2012	1	0	27	7	40	24	16	10	6	5	136
2013	0	0	28	17	31	27	19	10	4	7	143
2014	0	0	35	13	30	20	17	11	5	5	136
2015	0	0	39	8	32	30	24	11	6	10	160
2016	0	0	41	10	57	33	18	9	3	5	176
Total	1	0	170	55	190	134	94	51	24	32	751

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of sheep hunting opportunity for residents and nonresidents. No conservation concerns are addressed or created by this proposal. If adopted, the record should show that the board has determined that the new regulations continue to provide a reasonable opportunity for success in customary and traditional uses of Dall sheep in Unit 11.

COST ANALYSIS: Adoption of this proposal would not result in significant additional costs for the department.

PROPOSAL 75 – 5 AAC 85.055. Hunting seasons and bag limits for Dall sheep. Allow nonresidents to obtain one general season Dall sheep permit in a regulatory year in the Central/Southwest Region.

PROPOSED BY: Chris Harper

WHAT WOULD THE PROPOSAL DO? This proposal would allow nonresidents to obtain a general season Dall sheep permit to harvest a full-curl ram every regulatory year instead of once every four years if they voluntarily give up their right to hunt other species of big game during the same regulatory year in Central/Southwest Region (Region IV).

WHAT ARE THE CURRENT REGULATIONS? The current sheep hunting regulations can be found in 5 AAC 85.055 and in the *2017–2018 Alaska Hunting Regulations*. There is currently a season for Dall sheep in Units 9, 11, 13, 14A&B, and 16.

- **Resident hunters:** All harvest ticket Dall sheep hunts in the region have a bag limit of one full-curl ram per regulatory year except that:
 - Drawing hunts in the Unit 14A (DS 170–DS195) and 13D-West (DS160) portions of the Chugach Mountains have bag limit of one ram.
 - The Tok Management Area (TMA) drawing permit hunts in Unit 13C (DS102 and DS103) have a bag limit of one ram every four regulatory years.
- **Nonresident hunters:** All harvest ticket hunts for Dall sheep in the region have a bag limit of one full-curl ram every four years except that:
 - Drawing hunts in the Unit 14A (DS 270–DS290) and Unit 13D-West (DS260) portion of the Chugach Mountains allow the take of one ram every four years.
 - Drawing hunts in the Unit 13D-East portion (DS265) of the Chugach Mountains allow the take of one full-curl every four years.
 - The Tok Management Area (TMA) drawing permit hunts in Unit 13C (DS102 and DS103) have a bag limit of one ram every four regulatory years.

There is a positive customary and traditional finding for Dall sheep in Unit 11 with an amount necessary for subsistence of 60–75 sheep. The rest of the units either have a negative finding or no finding, and some are within a nonsubsistence area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal affects successful nonresident sheep hunters who want to hunt sheep more frequently than once every four years. It allows nonresidents to obtain a general season permit and take a full-curl ram more frequently than allowed under the current bag limit (one sheep every four years) if the hunter waives his or her right to hunt other big game species. Some areas may experience an increase in harvest.

BACKGROUND: In 2016 at the statewide meeting the Board adopted the one sheep every four regulatory years bag limit for nonresidents. The Central/Southwest Region has both full-curl and any-ram hunting opportunities. The full-curl bag limit provides maximum participation in sheep hunts and has not been linked to any negative effects on the sheep population or lamb production.

During 2012 through 2016, a total of 751 rams were harvested in the Central/Southwest Region – 272 (36%) were taken by nonresidents (Table 75-1). Statewide, 4.5% of successful nonresidents returned to Alaska to hunt sheep within four years of successfully harvesting a ram.

Table 75-1. Total resident (R) and nonresident (NR) Dall sheep ram harvest in the Central/Southwest Region by unit, RY2012–2016.

	Unit 9		Unit 11		Unit 13		Unit 14		Unit 16		
Reg. Year	R	NR	R	NR	R	NR	R	NR	R	NR	Total
2012	1	0	27	7	40	24	16	10	6	5	136
2013	0	0	28	17	31	27	19	10	4	7	143
2014	0	0	35	13	30	20	17	11	5	5	136
2015	0	0	39	8	32	30	24	11	6	10	160
2016	0	0	41	10	57	33	18	9	3	5	176
Total	1	0	170	55	190	134	94	51	24	32	751

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of sheep hunting opportunity for residents and nonresidents. No conservation concerns are addressed or created by this proposal. If adopted, the record should show that the board has determined that the new regulations continue to provide a reasonable opportunity for success in customary and traditional uses of Dall sheep in Unit 11.

COST ANALYSIS: Adoption of this proposal would not result in significant additional costs for the department.

PROPOSAL 76 – 5 AAC 92.015. Brown bear tag fee exemption. Reauthorize the brown bear tag fee exemptions for the Central/Southwest Region.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the brown bear tag fee exemptions in Units 9, 11, 13, 16, and 17.

WHAT ARE THE CURRENT REGULATIONS? The following regulations are currently in effect for Region IV brown bear hunts:

5AAC 92.015. Brown bear tag fee exemption

(a) A resident tag is not required for taking a brown bear in the following units:

(1) Unit 11;

(2) Units 13 and 16A;

(3) Units 16B and 17;

...

(11) Unit 9, within the following areas, unless a smaller area is defined by the department in an applicable permit:

(A) Unit 9B, within five miles of the communities of Port Alsworth, Nondalton, Iliamna, Newhalen, Pile Bay, Pedro Bay, Pope Vanoy Landing, Kakhonak, Igiugig, and Levelock;

(B) Unit 9C, within five miles of the communities of King Salmon, Naknek, and South Naknek;

(C) Unit 9D, within five miles of the communities of Cold Bay, King Cove, Sand Point, and Nelson Lagoon;

(D) Unit 9E, within five miles of the communities of Egegik, Pilot Point, Ugashik, Port Heiden, Port Moller, Chignik Lake, Chignik Lagoon, Chignik Bay, Perryville, and Ivanof Bay;

(12) Unit 10, within three miles of the community of False Pass, unless a smaller area is defined by the department in an applicable permit.

(b) In addition to the units as 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:

(1) Unit 9B;

(2) Unit 9E, that portion including all drainages that drain into the Pacific Ocean between Cape Kumliun and the border of Units 9D and 9E;

(3) Unit 17;

...

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Hunters will not be required to purchase a brown bear locking tag before hunting brown bears in Units 11, 13, 16, and 17. In addition, brown bear tag fees will not be required for subsistence hunts in Units 9 and 17 or for permit hunts near communities in Unit 9.

BACKGROUND: Brown bear tag fee exemptions must be reauthorized annually or the fee will be automatically reinstated.

General Season Hunts: The Board liberalized brown bear hunting regulations, including the tag fee exemption, to increase the opportunity to take brown bears in Units 11, 13, and 16 during the March 2003 Board of Game meeting and in Unit 17 during the March 2011 Board of Game meeting. The tag fee exemption in these Units provides greater opportunity to harvest brown bears by allowing opportunistic take. The brown bear populations in Units 11, 13, and 16B have negative C&T findings.

The board also exempted brown bear tag fees for bear hunts near communities in Unit 9 to address public safety concerns in communities during the March 2011 Board of Game meeting. Brown bears are abundant in Unit 9 and are managed as a trophy species. Brown bears are frequently observed in communities destroying property in search of food or garbage and occasionally killing pets. The liberalized bear seasons and bag limits along with the elimination of the tag fee is intended to allow people to take bears before they destroy property, to promote a greater acceptance of the unit's bear population, and to resolve some of the compliance issues associated with the take of DLP bears.

Subsistence Brown Bear Hunts: The Board waived the brown bear tag fee requirement for subsistence brown bear hunts in Unit 17 and portions of Unit 9. There is a positive customary and traditional use finding for brown bears in those portions of Units 17A and 17B that drain into the Nuyakuk and Tikchik lakes, with an amount reasonably necessary for subsistence of 5. There is a positive customary and traditional use finding for brown bears in the remainder of Unit 17B, and in Unit 17C, with an amount reasonably necessary for subsistence of 10–15 bears.

There is a positive customary and traditional use finding in Unit 9B, with an amount reasonably necessary for subsistence of 10–20, and a positive customary and traditional use finding in 9E, with an amount reasonably necessary for subsistence of 10–15. The remainder of Unit 9 has a negative customary and traditional use finding.

Subsistence brown bear harvest rates are low and well within sustainable limits. Exempting the resident tag fee has not caused an increase in subsistence harvest in these units. Continuation of the exemption accommodates cultural and traditional uses of brown bears in these units and provides an alternative for hunters who take brown bears primarily for their meat.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal because it provides greater sustainable harvest opportunity in Units 11, 13, 16, and 17; addresses public safety concerns in Unit 9; and provides subsistence harvest opportunity in portions of Units 9 and 17.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 77 – 5 AAC 85.045 Hunting seasons and bag limits for moose. Reauthorize the antlerless moose draw permits in Units 14A and 14B and increase permit levels in Unit 14A.

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the antlerless moose hunts in Units 14A and 14B; these hunts must be re-authorized annually by the Board to comply with statutory requirements. The proposal also requests that the permit level for Unit 14A be raised from 1,000 to 1,500 permits.

WHAT ARE THE CURRENT REGULATIONS?

- The department is allowed to issue up to 1,000 drawing permits to resident hunters in Unit 14A with a bag limit of one antlerless moose. The season is August 20–September 25 for DM400–DM412 and November 1–December 25 for DM413.
- The department may also issue up to 200 permits to resident hunters for the targeted hunt in Unit 14A with a bag limit of one moose during a winter season to be announced by emergency order.
- The department may also issue up to 100 additional permits to resident hunters for a targeted hunt in Unit 14B with a bag limit of one moose during a winter season to be announced by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal reauthorizes the antlerless moose hunts in Units 14A and 14B; these hunts are needed to keep the moose population within management objectives and provide additional hunting opportunity for residents. The targeted hunt also provides managers with a tool to reduce moose-vehicle collisions and address nuisance moose issues. In addition the department would like to increase the number of permits available from 1,000 to 1,500 to provide flexibility to the department to reduce the population to the management objectives in a timely manner.

BACKGROUND: Moose surveys conducted in February 2017 resulted in an estimate of 8,700 moose in Unit 14A. This is similar to the 2013 population estimate and is greater than the population objective of 6,000–6,500 moose. Twinning surveys conducted in the spring of 2017 showed a twinning rate of 27%, indicative of a population that is still increasing.

The number of antlerless permits available was raised in spring of 2011 from 400 to 1,000. Due to the heavy snows which occurred that same winter, there were no antlerless permits issued in 2012. Subsequent surveys indicated that the moose population was not adversely affected by the winter of 2011 and was continuing to grow. The number of permits available has been increasing and was raised to the limit of 1,000 permits for the fall of 2017. The success rate for hunters under the antlerless permits has remained steady at about 67% for the past five years.

The targeted moose hunt in Units 14A and 14B provide an additional tool to address public safety concerns related to moose-vehicle collision and nuisance management issues. The AM415 targeted hunt has been in place since 2012. Under this permit, hunters are either designated a specific nuisance moose to take, or are assigned one of four areas where a high number of moose-vehicle collisions are known to occur. In this scenario permits are issued as snow increases and moose become more prevalent along roadways. The winter of 2014 was very mild with almost no snow. As a result only 20 permits were issued that year. Excluding 2014, on average 143 permits have been issued and 110 moose have been taken for an average success rate of 77%.

Based on current projections, the Unit 14A moose population is expected to grow and continue to exceed population objectives. If the density of moose is allowed to increase, we anticipate an increase in the number of moose-human conflicts, and moose may experience nutritional stress, particularly during severe winters.

Browse surveys completed in the spring of 2016 demonstrated a removal rate of 37.13% ($\pm 6.9\%$ at the 95% CI). This offtake indicated a relatively high proportion of commonly browsed plants in the unit are being consumed, suggesting the moose population in Unit 14A may be approaching their carrying capacity. Browse surveys were conducted at the end of a winter which had little snowfall, and browsing appeared to be more evenly distributed than in what would be found in a ‘typical’ year.

Moose-vehicle collisions result in property damage and may result in human injury or death. An average of 281 moose per year were killed in the Mat-Su Valley area during the last few years of average snowfall and substantially more were killed during higher snowfall years. The department also receives periodic complaints from the public about crop depredation and aggressive behavior that can be mitigated by this hunt structure.

The Department uses the targeted hunts to mitigate public safety concerns by issuing permits to selected hunters and assigning them to hunt areas that correspond with areas of high moose-vehicle collisions or reoccurring nuisance issues.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. Cow harvests are warranted to control the moose population’s growth and reduce moose-human conflicts in the

Mat-Su Valley. These hunts also provide additional moose hunting opportunity in the Mat-Su Valley.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 78 – 5 AAC 85.045(12). Hunting seasons and bag limits for moose. Authorize an any bull drawing permit hunt in Unit 14B.

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? This proposal would establish an ‘any bull’ drawing hunt for moose in Unit 14B with up to 100 permits available for residents only and season dates of August 25–September 25.

WHAT ARE THE CURRENT REGULATIONS?

- One bull with spike-fork antlers or 50 inch antlers or antlers with three or more brow tines on at least one side, by bow and arrow only for residents and nonresidents from August 10–17;
- One bull with spike-fork antlers or 50 inch antlers or antlers with three or more brow tines on at least one side, for residents and nonresidents from August 25–September 25; and
- One moose by targeted permit only (AM415); by shotgun or bow and arrow only; up to 100 permits may be issued; for residents only; winter season to be announced by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would provide additional harvest opportunity for resident hunters to aid in achieving the harvest objective of 100–200 moose while maintaining the management goal of ensuring a bull to cow ratio of ≥ 20 bulls: 100 cows.

BACKGROUND: The moose population in Unit 14B has increased in recent years from 1,662 in 2009 to 2,700 in 2013. Bull to cow ratios remained relatively stable at 30:100 cows but the calf-to-cow ratio increased considerably from 18 in 2009 to 28 in 2013. The 2013–2017 average harvest was 91 moose. The population objective for the Unit is 2,500–2,800 and the harvest objective is 100–200.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal to increase the moose harvest in Unit 14B and is **NEUTRAL** on the allocating the harvest between residents and nonresidents. Providing additional opportunity to harvest moose will aid the department in achieving the annual harvest objective of 100–200 moose while maintaining healthy bull-to-cow ratios.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 79 – 5 AAC 85.040 Hunting seasons and bag limits for Dall sheep. Modify the hunt structure for Dall sheep in Unit 14A.

PROPOSED BY: Dan Montgomery

WHAT WOULD THE PROPOSAL DO? This proposal would change the Dall sheep bag limit in the Chugach portion of Unit 14A from any ram to full-curl, both horns broken, or eight-years-old. It would retain the early and late season draw hunt periods for two years with fewer permits for residents: an increase in nonresident permit allocation to 20%. It would prevent the use of aircraft in any manner for the late season hunts. After two years the late season draw hunts would become registration hunts for residents only: nonresident hunts would remain draw hunts. Two years later, the nonresident draw hunts would become registration hunts as well.

WHAT ARE THE CURRENT REGULATIONS?

In the Chugach Mountains of Unit 14A:

- Bag limit is any ram
- Area split into three sub-areas
- Season dates August 10–25 or August 26–September 20
- Up to 100 permits available
- 10% of permits allocated to nonresidents

The remainder of Unit 14A in the Talkeetna Range has a full-curl bag limit with a general season of August 10–September 20 for both residents and nonresidents.

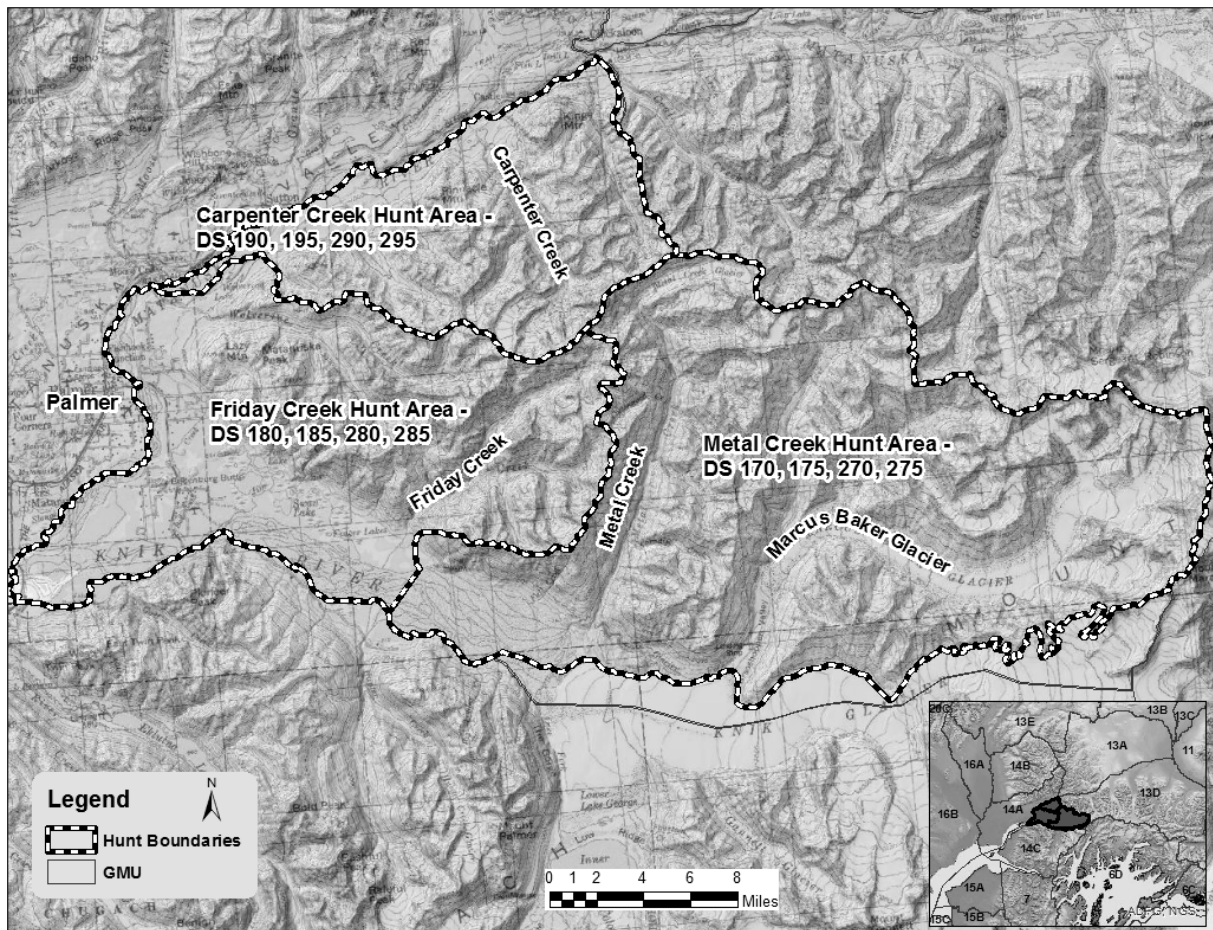


Figure 79-1. Unit 14A Chugach Dall Sheep Draw Hunt Area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?

- Bag limit changes from any ram to full-curl.
- Permits set at four resident and one nonresident per each of the three areas for each time period (30 permits total).
- Aircraft are not allowed to be used for sheep hunting in any manner after August 26.
- From August 26 to September 20 the draw system will remain as above for the first two years.
- After two years the late season resident draw will change to a registration hunt and non-resident opportunity will remain as a draw hunt.
- Two years after that change (four years into the new hunt structure) nonresident draw opportunities will change to registration hunt as well.

The proponent would like to increase the number of full-curl rams available for harvest which is the reasoning behind reducing the total number of permits available during the first two years of the new hunt structure. The proposed strategy will reduce hunter opportunity from the current permit levels by 60% during the first two years of the proposed switch. However by changing the bag limit from any-ram to full curl, the number of rams available may decrease after the first two

years and would most likely decrease after resident hunters were allowed to hunt the area under a registration permit. The 2017 sheep survey showed that the total number of sheep observed increased; however, the number of full-curl rams has not changed in the past several years – this proposal, if adopted, may exacerbate that issue.

BACKGROUND:

The board adopted the current regulations in 2007 following a decline in sheep numbers and continued high hunting pressure. The regulatory changes included the establishment of a drawing hunt structure in the Chugach Mountain areas, liberalization of bag limits in Unit 14A and western 13D to include any-ram hunts, and the allocation of harvest opportunity between residents and nonresidents. The current hunt structure was also designed to improve hunt quality by reducing “hunter crowding” through a drawing permit hunt structure, which reduced the number of hunters in the field by 62% in Unit 14A. The current management strategy has not resulted in a decrease in the number of sheep or the number of rams observed during surveys and provides opportunity to take without the pressure of determining full curl.

After the any ram drawing hunts were implemented in Unit 14A, sheep harvest decreased from an average of 24 rams (2000–2007) to 15 rams (2008–2017) (Table 79-1). The current level of harvest is sustainable and has not had a negative impact on the sheep population. In fact, under the any ram hunt structure the pressure on the full curl segment of the population is significantly reduced while still allowing for a number of trophy rams to be available to hunters dedicated to finding large rams (Table 79-2). The reduced harvest was a direct result of limiting the number of hunters that could participate in the hunt under the new draw permit system. Hunter success increased from 22% to 37% after the drawing permit hunt was implemented.

Table 79-1. Unit 14A Dall sheep hunts and harvest, regulatory years 2000 through 2017.

Regulatory Year	Total Permits	Total Hunters	Total Harvest	% Success	Average Length of Longest Horn	Average Age
<i>Pre-Draw</i>						
2002	-	104	20	19%	34.5	8.4
2003	-	103	22	21%	35.9	8.9
2004	-	113	32	28%	36.1	8.5
2005	-	104	29	28%	36.5	8.4
2006	-	125	24	19%	36.1	8.5
2007	-	104	22	21%	35.4	8.6
<i>Post-Draw</i>						
2008	40	28	9	32%	32.8	6.7
2009	40	26	11	42%	27.6	5.5
2010	40	21	6	29%	29.4	6.7
2011	50	40	14	35%	35.0	7.4
2012	50	40	13	33%	32.7	7.2
2013	75	41	18	44%	30.6	6.9
2014	75	53	18	34%	33.2	7.1
2015	75	53	22	42%	32.5	7.3
2016	75	53	15	28%	32.5	7.5
2017	75	54	25	46%	30.8	6.5

Table 79-2. Unit14A Dall sheep survey composition results and harvest, regulatory years 1998 through 2017.

Survey Year	Total Rams Observed	≥ Full curl Rams Observed	≥ Full curl Harvested	% Full curl Harvested ^a	Sub-full curl Observed	Sub-full curl Harvested	% Sub-full curl Harvested
1998	218	28	38	136%	190	0	0%
2002	276	19	32	168%	257	0	0%
2006	167	26	35	135%	141	0	0%
2007	145	18	34	189%	127	0	0%
2009	134	8	0	0%	126	11	9%
2010	167	14	3	21%	153	3	2%
2012	177	16	5	31%	161	8	5%
2013	168	11	7	64%	157	11	7%
2014	172	13	9	69%	155	9	6%
2017	254	14	7	50%	240	18	8%

^a Percent full curl harvested is in relation to the number of full curl rams observed during the most recent surveys. Percentages greater than 100% indicate that more rams were harvested than were observed during that year's survey.

The horn length of sheep harvested decreased from an average of 36 inches to 32 inches after the any ram drawing hunts were established. While the department anticipated a decrease in the overall horn length as a result of the change in the management strategy, Taz-West in Unit 13D did not experience a decrease in horn length. Part of the reason for the decrease appears to be due to the method of accessing the area. In 14A Chugach there are a few places where hunters via foot or all-terrain vehicle (ATV) can access the area. Among those hunters who reported taking a <3/4 curl ram since the area went to an any-ram bag limit in 2007, 50% accessed the area by ATV, horse, or on foot, and 50% used airplanes. Among hunters who took sheep >7/8 curl to over full curl, 76% used airplanes and only 24% accessed the area by other methods. This appears to suggest that those hunters not utilizing airplanes are more likely to take full advantage of the any-ram bag limit and are not seeking older rams which may require additional effort away from the ground access areas.

The any ram opportunity provided by these drawing hunts is extremely popular since it removes the legal requirement of judging full curl before harvesting a sheep. This is demonstrated by the 4,953 applications received for these hunts in 2016. The only sheep drawing more popular is in the Tok Management Area, which received 5,415 applications for 2016.

Under the proposed permit structure, 30 permits would be issued for the Unit 14A drawing hunt in 2019: 24 permits issued to residents and six to nonresidents. This change would result in a 60% reduction in sheep hunting opportunity in Unit 14A, and a commensurate reduction in harvest. This is also an increase in the allocation to nonresidents from 10% to 20%.

While the aircraft prohibition may result in fewer hunters during the August 26–September 20 period initially, once the area becomes a registration hunt for residents and nonresidents under this proposal in 2023 crowding may again become an issue because only a few areas are

accessible by ATV. This may also lead to depletions of available sheep near the walk-in and ATV access points.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because either management strategy (current or proposed) can be used to sustainably manage sheep in the unit.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 80 – 5 AAC Hunting seasons and bag limits for goat. Open a resident registration hunt for mountain goat in Unit 14A.

PROPOSED BY: Dan Montgomery

WHAT WOULD THE PROPOSAL DO? This proposal would change the draw hunts for mountain goats in Unit 14A Chugach to non-resident only, and would limit the number of permits available to five. Resident goat hunters in 14A Chugach would be able to obtain a registration permit. It would also set the harvest quota at six percent of the total goats observed in the most recent survey.

WHAT ARE THE CURRENT REGULATIONS?

- 1 goat by drawing permit only; up to 50 permits may be issued. Metal Creek, DG890 (20 Permits) and Marcus Baker, DG891 (30 Permits).
 - Season Dates Sept. 1–Oct. 31 (set at Oct. 15 since RY14).
- Registration hunts RG890 (Metal Creek) and RG891 (Marcus Baker) Oct. 1–Oct. 31 may be announced.
 - Last registration hunt was in RY13.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?

- Retain draw goat hunts for non-residents only.
- Issue two permits for DG890 and three permits for DG891.
- Use registration hunts RG890 and RG891 for residents only.
- Season dates will be September 1–October 15.
- Set harvest goal at 6% of the total count of the latest aerial survey.

The proposed hunt structure of nonresidents on a drawing permit and residents by registration would simplify management and could increase the likelihood of hitting or exceeding the quota. This proposed structure would align with the adjacent 14C goat hunt that occurs across the glacier in the Lake George area. This hunt structure was adopted for the 14C during the last Southcentral Board meeting to address guided nonresidents over shooting their quota in a few short days. Initial reports state that this structure provides the expected reliable opportunity of the nonresidents and a relatively long season of approximately one month for residents.

The board should note that under this proposal nonresidents may be responsible for a larger percentage of the harvest than the board has allowed in the past. For example the average quota for the previous five years has been 11 goat points (females count as two goat points and males one). On average 20% of nonresidents harvest a nanny in this hunt. Five non-resident permittees who successfully took four billies and one nanny would have 55% share of the available animals.

BACKGROUND: The board adopted a draw hunt for mountain goats in 2007 after the harvest exceeded the quota in eight out of the 10 previous years (Figure 80-1). In the spring of 2011 the board added a registration hunt for goats to allow for additional opportunity because the harvest was less than the available quota for the previous three years. The board also instructed the department to split the hunt into two areas to distribute hunting pressure. Registration permits were made available in 2011 through 2013 and were not limited in 2011 which led to a harvest that greatly exceeded the quota. In 2012 and 2013 small available quotas and high demand resulted in the department limiting the number of registration permits available. This created a first come, first serve situation to receive a permit, and contributed to the decision to not hold the registration hunt after 2013. In 2014 through 2017 the department offered the maximum amount of permits available for the draw hunt and did not offer a registration hunt. This yielded a relative consistent achievement of the harvest quota.

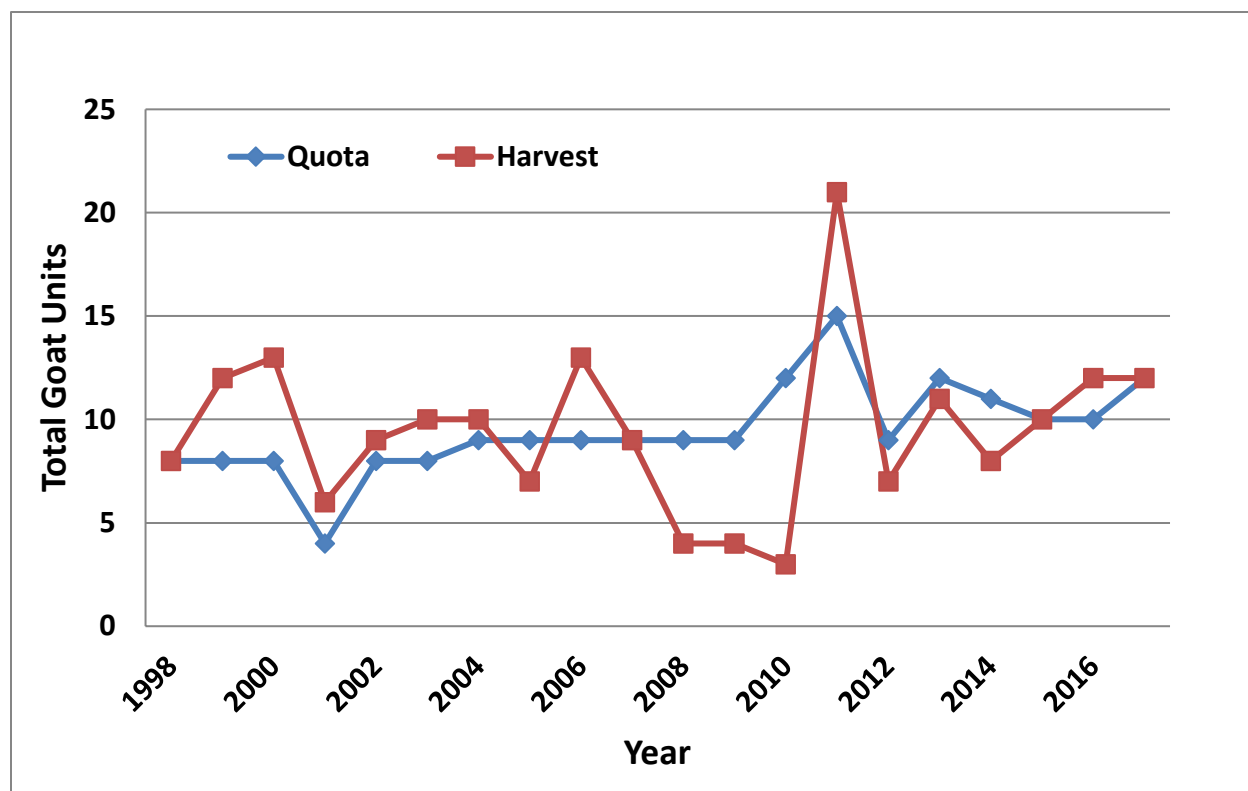


Figure 80-1. Unit 14A Chugach Goat quota and harvest, RY1998–2017.

Prior to 2008 mountain goats were managed under a registration hunt system. Between 2000 and 2007, non-residents comprised 31% of the goat hunters and harvested 63% of the goats taken, and residents were 69% of the hunters and they took 37% of the goats harvested. When the area went to a draw hunt the board did not set a percentage level for non-residents. Between 2008 and 2017

nonresidents averaged 5% of the hunters drawn and they took less than 12% of the goats harvested. The success rate of nonresidents between 2008 and 2017 averaged 64%, and residents averaged 35%.

The department uses varying strategies for setting goat harvest quotas around the state. Most areas use 3%–5% of the total population of goats to set the harvest quota. The highest rate of harvest occurs on Kodiak Island where the population is still increasing. In recent years the 14A goat quota has been set at 7% of the adult goat population (approximately 5.5% of total population). However, many factors are considered when setting the quotas, such as climate patterns, harvest and population information, sightability of goats in particular areas, and herd history in relation to these factors.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of goats to residents and nonresidents, and the department does not have a biological concern.

The department would like to retain the ability to adjust and set harvest quotas based on the most current biological information collected in response to population fluctuations and changes on the landscape.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 81 – 5 AAC 85.020 Seasons and bag limits for brown bear, and 92.044. Permit for hunting bear with the use of bait or scent lures. Increase the bag limit for brown bear and allow the harvest of brown bear at black bear bait stations in Unit 14A.

PROPOSED BY: The Alaskan Bowhunters Association

WHAT WOULD THE PROPOSAL DO? The proposal would change the bag limit for brown bear in Unit 14A from one bear every four years to one bear every year. The proposal would also allow the taking of brown bears at black bear bait stations. The proposer suggests that the regulation could be for just the portion west of the Little Susitna River and west of the Parks Highway instead of unitwide.

WHAT ARE THE CURRENT REGULATIONS? The current regulations in Unit 14A are one brown bear every four years, the open season is from September 1 – May 31, and brown bears may not be taken over bait. The black bear baiting season is April 15–June 30, and there is a three bear bag limit with no closed season. In Unit 14B the bag limit is one brown bear every regulatory year, and the open season is August 10 – May 31. Brown bears may be taken over bait from April 15 – June 30, and brown bears may be taken at bait sites the same day a person has flown, provided that the hunter is at least 300 feet from the plane. A resident metal locking tag is required in both Units 14A and 14B.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow hunters with black bear bait stations to take brown bears in all or a portion

of Unit 14A and would change the bag limit in all or a portion of Unit 14A to one brown bear per year. Adoption of this proposal is expected to increase harvest of brown bears and may lead to localized depletions in areas where bear baiting is popular. Having a separate bag limit for a portion of the unit as suggested by the proponent may be difficult for enforcement and confusing for the public.

BACKGROUND: Brown bear harvest in Unit 14A averaged eight bears annually from 2007 through 2016. Most bears are taken in the fall and the spring harvest averages one bear per year. The percent of females in the harvest has been 47% between 2007 and 2016. The management objective is for no more than 50% of the harvest to be females in all of Unit 14 (Figure 81-1).

Unit 14A has few public safety concerns or nuisance complaints, and kills in defense of life and property are low, averaging 1.6 brown bear from 2007 through 2016. The board allowed the taking of brown bears over bait in Unit 14B in the spring of 2016. At that time two of the three bears taken that spring were taken over bait.

Brown bears are known to be a significant predator for moose. The moose population in Unit 14A has been above objective for several years and good fall calf-to-cow ratios indicate that bears are not limiting the population.

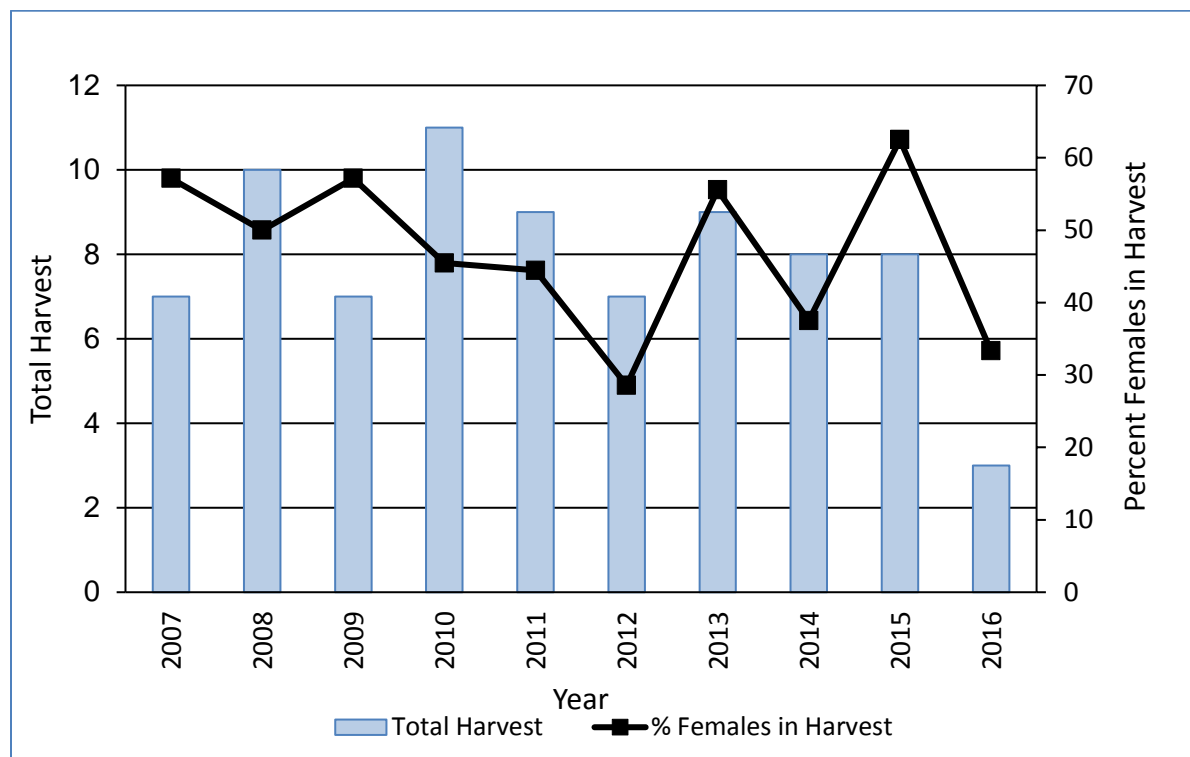


Figure 81-1. Unit 14A Brown bear harvest and percent females in the harvest

Black bear harvest in Unit 14A has averaged 73 bears annually over the past ten years (Figure 81-2). On average 72% of the black bears are taken in the spring and 67% of those bears are taken over bait. Females comprise 40% of the harvest.

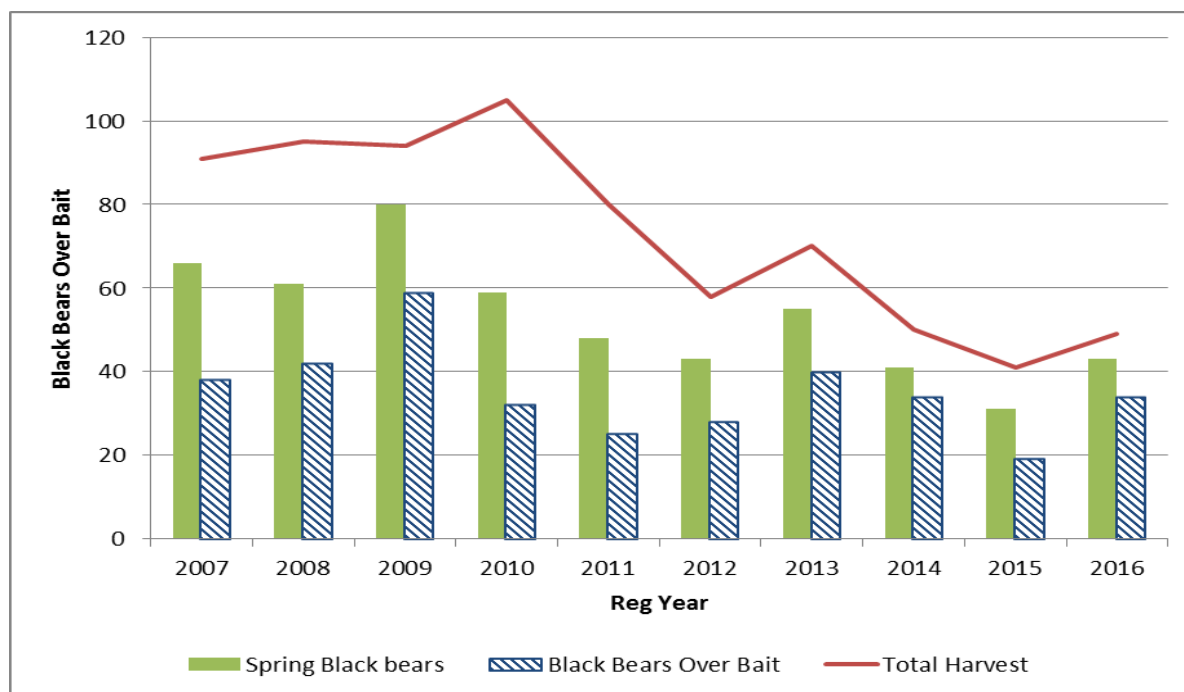


Figure 81-2. Unit 14A black bear harvest.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since it has not identified a biological concern for bears in Unit 14A. Adoption of this proposal is expected to increase harvest of brown bears and may lead to localized depletions of the bear population in areas where bear baiting is popular. If the board adopts this proposal the department requests the board consider if it would like to allow the take of brown bears at bait stations the same day the hunter has flown, to be consistent with existing black bear baiting conditions, and other areas that allow the take of brown bears over bait.

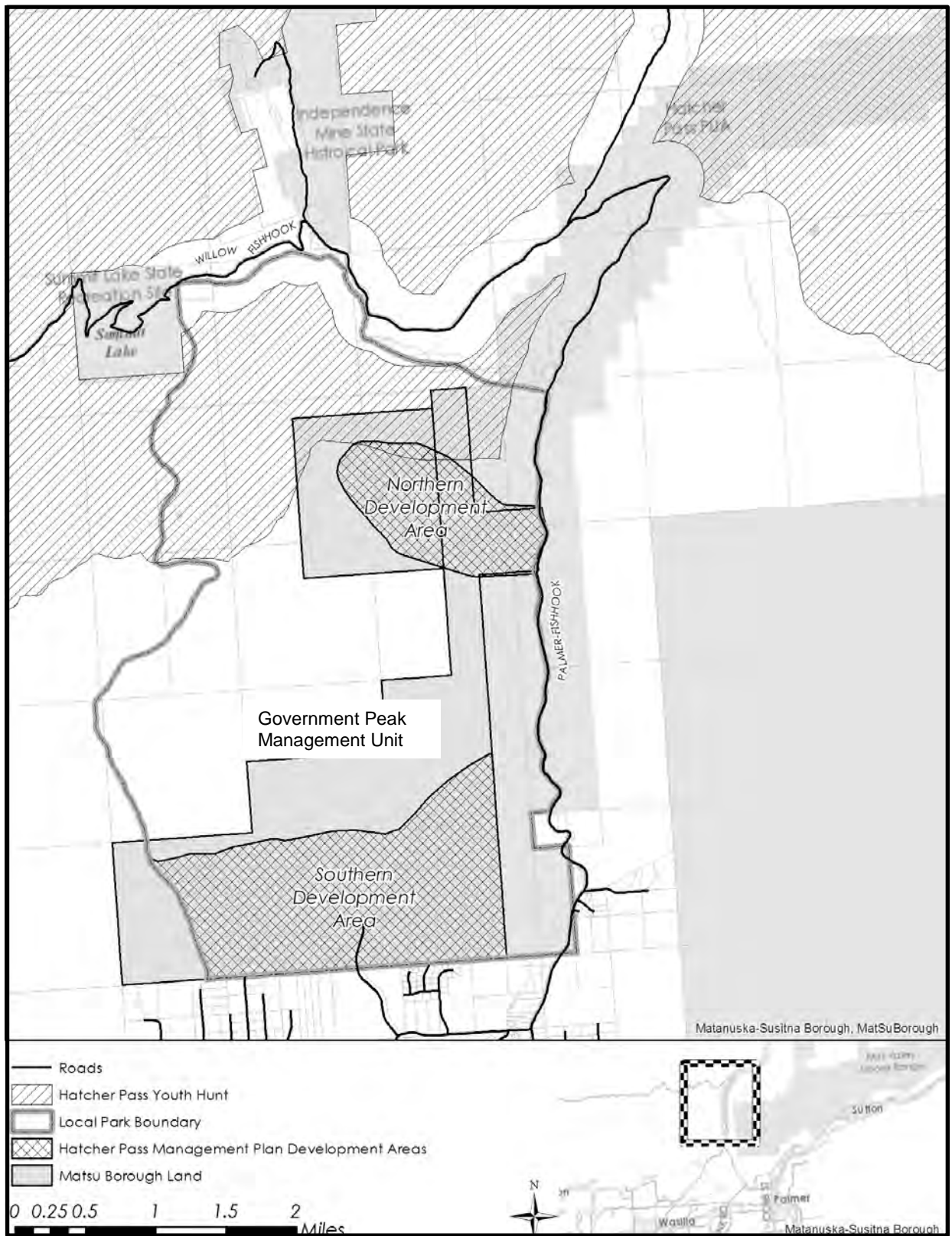
COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 82 – 5 AAC 92.530 Management areas. Create a management area for the Mat-Su Borough’s Government Peak Recreation area in Unit 14A

PROPOSED BY: Matanuska-Susitna Borough, Land and Resources Management Division.

WHAT WOULD THE PROPOSAL DO? Create a management area for the Matanuska-Susitna (Mat-Su) Borough’s Government Peak Recreation Area in Unit 14A.

WHAT ARE THE CURRENT REGULATIONS? The Government Peak Management Unit in Unit 14A encompasses general state land, state parks, Matanuska-Susitna Borough owned lands, and state conveyed lands. Under 11 AAC 96.014(b)(3)(E), in the High Glacier Peaks, Government Peak, Independence, and Mile 16 management units and in portions of the Archangel and Reed Lakes/Little Susitna management units, a person may not use or discharge a firearm except for the purposes of lawful hunting, and within the Independence State Mine Historical Park, the Summit Lake State Recreation Site, and the Northern and Southern Development areas in the Government Peak Management Unit, a person may not use or discharge a firearm for any purpose (Figure 82-1).



The two parcels within Government Peak Management Unit for consideration under this proposal, Northern Development Area (owned by the Mat-Su Borough) and Southern

Development Area (comprised of state conveyed and borough land), are already closed to the discharge of firearms, including for hunting under the Hatcher Pass Management Plan.

The Hatcher Pass Youth Hunt Management Area (HPYHA) currently overlaps a small portion of the Northern Development Unit in the northwest corner along Bald Mountain Ridge. From August 10 to August 25, the area is closed to small game hunting except that small game may be taken by youth hunters 16 years old or younger accompanied by a licensed hunter 18 years old or older who has successfully completed a certified hunter education course if the youth has not successfully completed a certified hunter education; youth and accompanying adults must wear hunter orange vests while in the field.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If affirmative action was taken on this proposal, a new state management area would be designated on top of the existing borough and state management areas, and included in the annual hunting regulations. The HPYHA would have to be modified so as to not overlap with the Northern Development Unit or be removed completely from the Government Peak Unit depending on what action the board takes. This would result in the loss of some youth and adult hunting opportunities.

BACKGROUND: The proponent would like the department to identify the Mat-Su Borough lands within the Government Peak Management Unit closed to the discharge of firearms in the state hunting regulations booklet that is made available to the public annually. The department only includes state restrictions in the hunting regulations. Restrictions on private property and local-government weapons restrictions are not specifically addressed in the regulations booklet. Hunters are reminded that it is their responsibility to know the local regulations and land status to ensure that they may legally hunt in whatever area they choose.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since this is not a biological issue; however, we caution against increasing regulatory and administrative complexity.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 83 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Change the antler restrictions for moose hunting in Unit 16A.

PROPOSED BY: Neil DeWitt

WHAT WOULD THE PROPOSAL DO? The proposal would allow the taking of moose with spike-fork antlers, or at least three brow tines on at least one side in Unit 16A. It would remove the 50-inch component of the regulation.

WHAT ARE THE CURRENT REGULATIONS? Under the current regulations resident and non-resident hunters may take one bull moose with spike-fork antlers, or 50-inch antlers, or antlers with three or more brow tines with a bow and arrow only from Aug. 10–Aug. 17; or under general hunt regulations from Aug. 20–Sept. 25.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would remove the 50-inch component of the regulation such that the only legal moose for harvest under the general season regulations in Unit 16A would be those moose with a spike, a fork, or at least three brow tines on one side regardless of the antler spread. Under this proposal illegal harvest of sublegal moose may be reduced because hunters will ensure that larger bulls will have at least three brow tines on one side of their antlers; however, harvest will also be reduced under this proposal given that moose with fewer than three brow tines on either side will not be legal no matter how wide the antlers are. A decrease in harvest as a result of fewer hunters taking what were previously legal moose would increase the bull to cow ratio and may result in the harvest being below objective.

BACKGROUND: Unit 16A went to spike-fork, 50 inches, or three brow tines in 1993 at the same time that other units in the region were converting to this management strategy. Units have been managed at three or four brow tines based on rates of brow tine growth commensurate with antler width at 50 inches. Over the past 25 years hunters in Unit 16A have reported that 11.7% of the moose that they have taken have been ≥ 50 inches and yet did not have three or more brow tines on one side. The average harvest of all moose for the past five years has been 142 and harvest has been increasing (Figure 83-1). The harvest objective is for 190–360. The GSPE survey in 2009 provided a bull: 100 cow ratio of 26. The management objective for this unit is 20–25 bulls: 100 cows. The amount of illegal harvest that goes unreported or undiscovered is unknown.

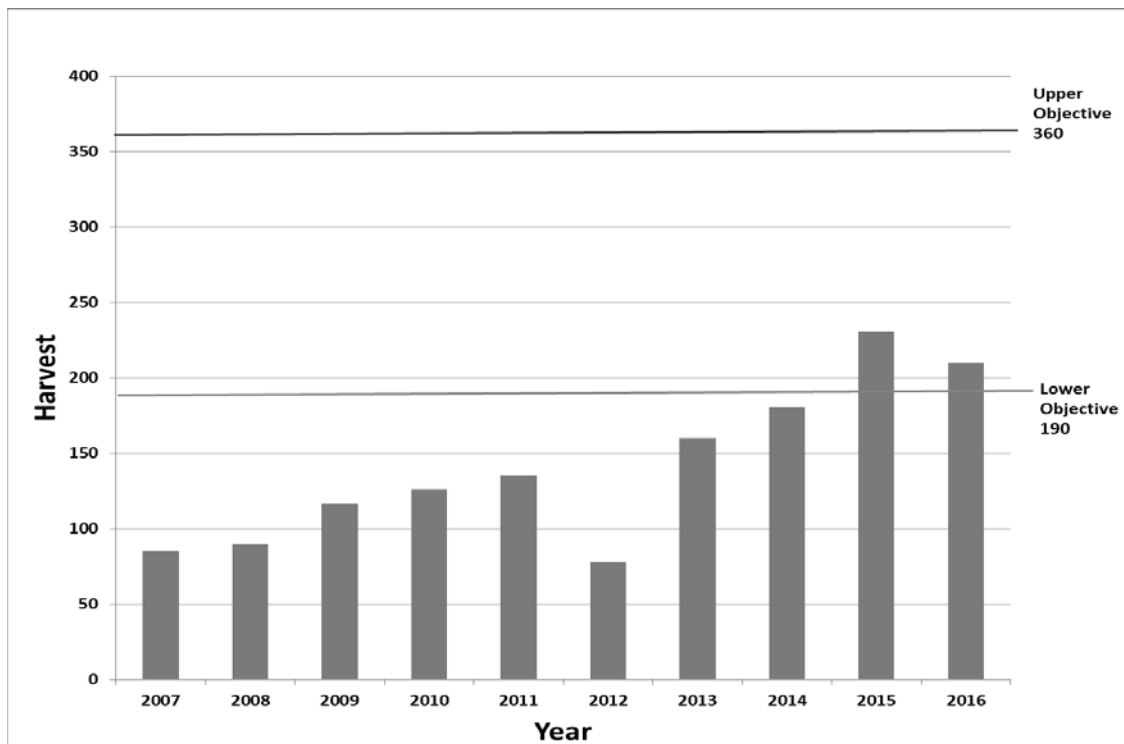


Figure 83-1. Unit 16A moose harvest, RY2007–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal since the proposal does not address a biological concern. Under this proposal harvest may decrease and may result in fewer sub-legal moose being taken, but it is difficult to say the degree of impact this would have on the total moose harvest. Adopting this proposal will also create a new category of legal moose under a selective harvest management system.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 84 – 5 AAC 92.108 Identified big game prey populations and objectives. Raise the population objective for moose in Unit 16B.

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? This proposal would raise the Unit 16B population objective for moose from 6,500–7,500 to 10,000–13,000.

WHAT ARE THE CURRENT REGULATIONS? The population objective is 6,500–7,500 moose and the harvest objective is 310–600 moose annually.

The Board of Game has made positive customary and traditional use findings for the following moose populations in Unit 16B:

Area	Amount reasonably necessary for subsistence
16B Redoubt Bay drainages	10 moose
16B south of the Beluga River and north of Redoubt Bay	29–37 moose
16B north of the Beluga River	160–180 moose

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The moose population in Unit 16B is currently estimated at 7,418 ± 1,148 moose which is within the current objectives. Increasing the population objective to 10,000–13,000 would result in the current population being below the objective. This could have implications for the current hunting seasons, including the any bull and Tier II seasons, and could affect the status and feasibility assessment of the intensive management program in Unit 16. Additionally, there may be habitat limitations that would prevent the increased population levels from being sustained and any population crash that might occur in the future may be more severe at these levels and require a longer time to recover to this new objective.

BACKGROUND: Before 1940, moose were uncommon in Unit 16B. After that time, habitat changes and federal predator control allowed the population to increase. Moose populations fluctuate greatly in Unit 16B due to heavy snow years that seem to occur once or twice every

decade. A unitwide estimate of the moose population in Unit 16B was not completed prior to 1985. At that time surveys were conducted in count areas in the alpine and subalpine areas and forested areas were avoided due to sightability limitations. The first Gasaway style moose population surveys were conducted in November of 1990. Based on the results of the 1990 survey, and the estimated population reduction of moose as a result of the severe winter of 1989-1990, area staff estimated the 1989 fall population to be $8,500 \pm 1,000$ moose. This was the highest recorded population estimate for the unit and would be below the lower end of the proposed population objective. The population has been within its current objective 15 of the last 27 years (Figure 84-1). Given the potential for periodic severe winter weather to reduce the population, and for predators to impede population recovery, higher population levels may be untenable.

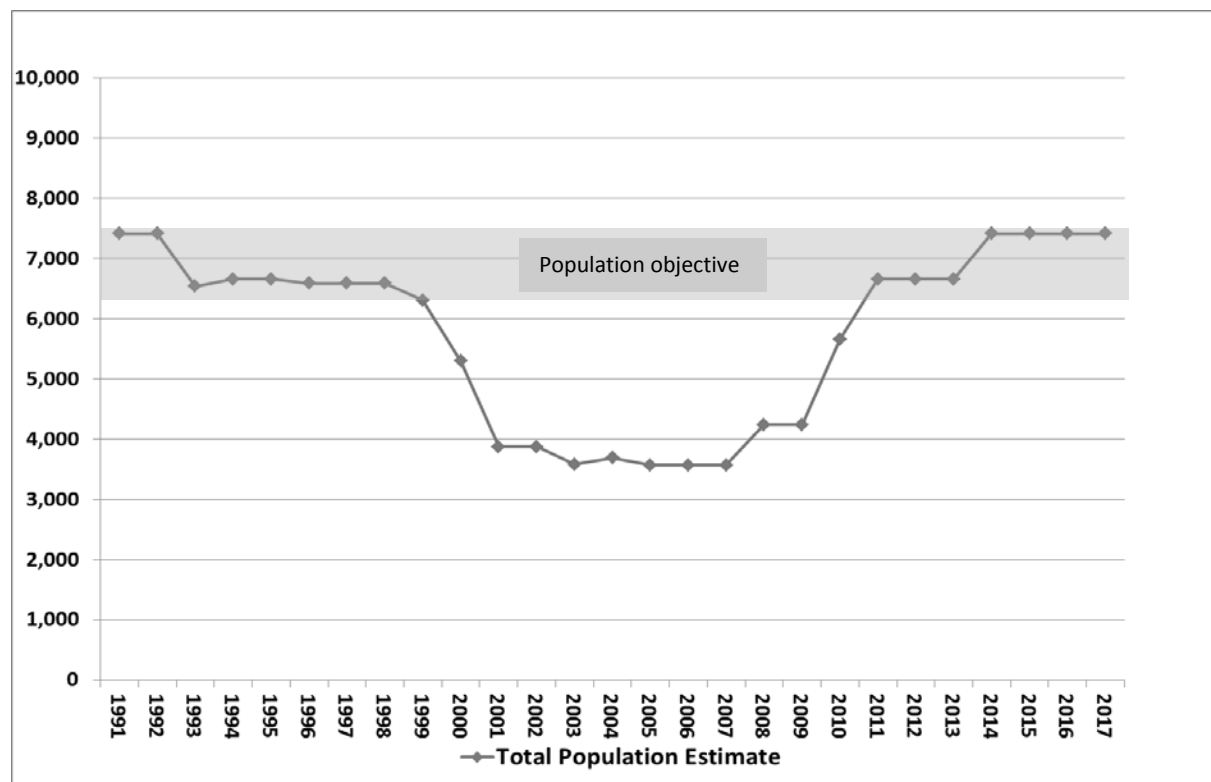


Figure 84-1. Unit 16B moose population estimate, RY1992 –2017.

This moose population was identified for intensive management and recent population growth occurred in conjunction with predation control for bears and wolves. The predation control program began in 2004 with wolf reduction. That program successfully reduced the wolf population to within the management objective of between 22 and 45 wolves in Unit 16B and was suspended in 2014. Black bear control was initiated in 2007 and brown bear control was initiated in 2011. The objective of the black bear control program was to reduce, by 60–80%, the

population of black bears, which was estimated to be $3,500 \pm 300$ in Unit 16B in 2007. The objective of the brown bear control program was to reduce, by 60%, the population of brown bears, which was estimated at 937 ± 313 in 2007. Moose surveys in the southern portion of the unit in 2010, the middle portion of the unit in 2013, and the northern portion of the unit in 2014 suggested that the population is within the population objective. Due to the increases observed in the moose population, and the ineffectiveness of the bear control programs, managers suspended the bear control programs in 2016.

The department has maintained a sample of radiocollared cow moose since the spring of 2005. Calf twinning and recruitment rates have been determined by locating the cows and their offspring throughout calving season and determining survival to fall. Twinning rates for the radiocollared cows in Unit 16B moose population averaged 53% during the study period. Calf recruitment to fall has increased from 8% in 2005 to 35% in 2016 (figures 84-2 and 84-3).

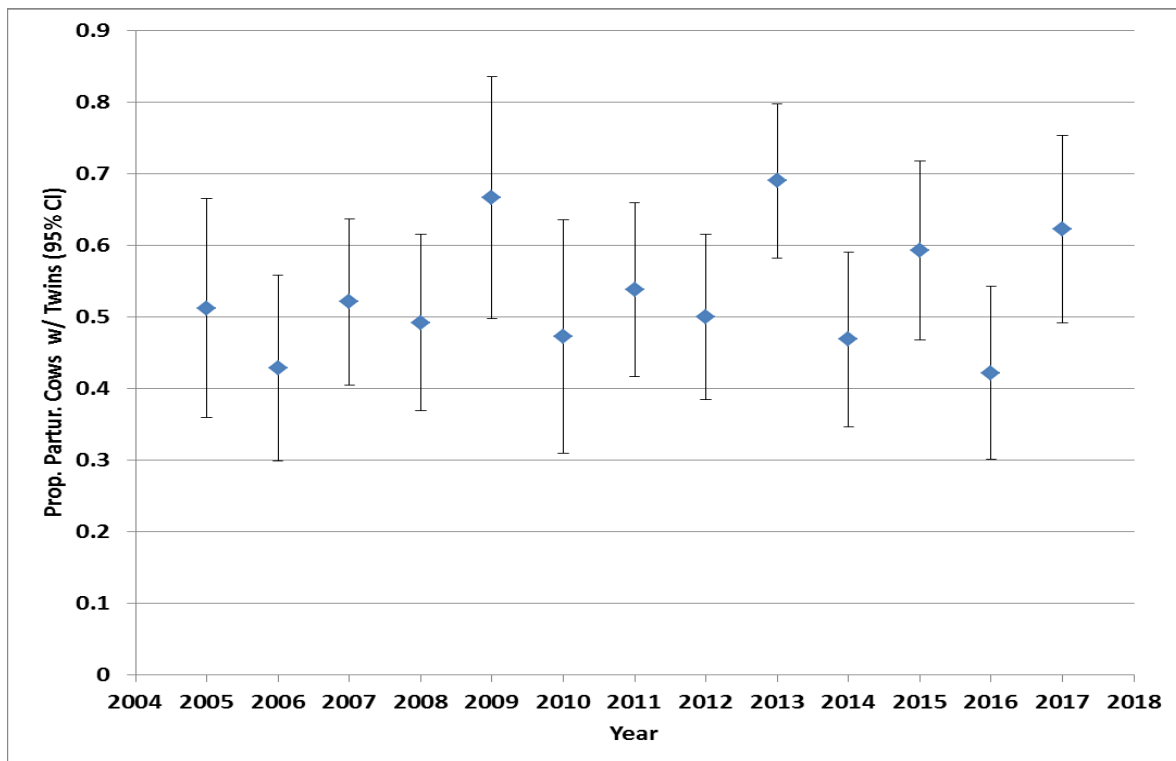


Figure 84-2. Unit 16B Twinning rates of radiocollared cows, 2005–2017.

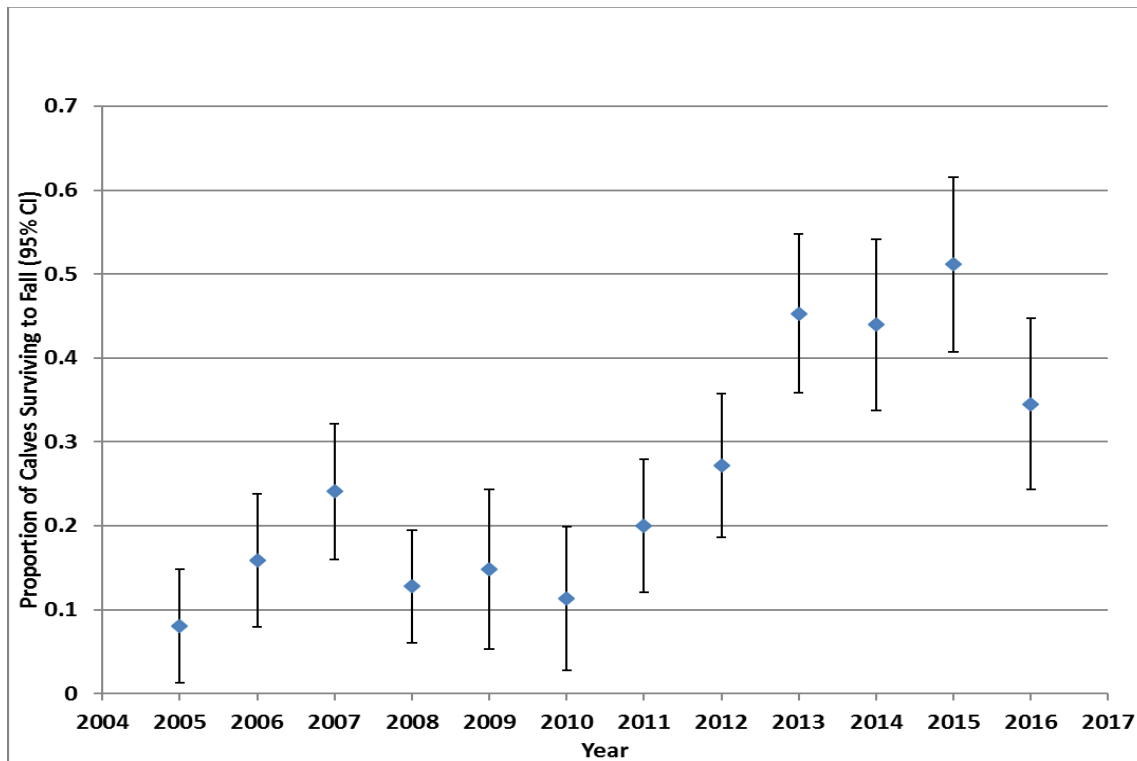


Figure 84-3. Unit 16B calf survival to fall, 2005–2016.

In the spring of 2017 ADF&G conducted captures of 10-month old females and their weights indicated excellent nutritional condition. Based on the results of the radiocollar study and the most recent surveys the population appears to be growing. Although nutritional indices are currently good there is typically a lag in browse reduction due to population growth. Habitat limitations may support sustained higher population levels, but at this time we do not have an estimate of what population level the area can support. Browse surveys are needed to monitor the habitat condition. The department should have browse survey data available for the next Region IV meeting. Historical evidence demonstrates that the area is subject to severe weather on a decadal basis. An additional consideration is that the impacts of severe winters may be exacerbated at high population levels.

The department's 1989 management report of moose survey and inventory activities stated that the Unit 16 population objective was 10,000 moose for both 16A and 16B combined. Unit 16A and 16B were split in the 1993 management report of moose survey and inventory activities and at that time the population objective for Unit 16B was 7,000 moose. In the 1995 report the management objective for the unit was stated as "a minimum fall moose population of 6,500."

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the proposed changes to the population objectives do not necessarily create a biological concern for the moose population; however, the population's nutritional status and browse data will need to be monitored very closely to ensure that the new objectives are not too high, which could result in damage to the habitat through over-browsing. In addition, moose production would be allocated more toward growth than harvest. The current harvest objectives are sustainable at the recommended population objectives. If the board chooses to increase the population objective, the department requests consideration for leaving the lower end of the objective in place. To do otherwise would result in the need to reevaluate other management programs within Unit 16B such as the current hunt structure and the direction of the IM program in Unit 16B. In addition, the department would recommend a more modest increase in the upper population objective to avoid poor nutritional condition or over-browsing.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 85 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Lengthen the resident hunting season for moose in Unit 16B (DM540, YM541 and RM574).

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? This proposal would remove the spike-fork, 50-inches, or three brow tine requirement of the general season fall hunt and replace it with an any bull bag limit for the general season. Drawing hunts DM540 (any bull, fall season) and YM541 (youth any bull, fall and winter season), and the registration hunt RM574 (any bull, winter season) would be eliminated. The general season hunt would also be extended to occur from August 20–September 30 for both residents and nonresidents in Unit 16B. An option suggested by the author of this proposal is to restrict the any bull portion of the hunt to August 20–September 10 and leave the bag limit for the September 10–September 25 portion of the season as moose with antlers having a spike or fork on at least one side, or a minimum of three brow tines on at least one side, or a minimum total width of 50 inches.

WHAT ARE THE CURRENT REGULATIONS?

Unit 16B

Residents	Hunts	Dates
One bull by permit	DM540	Aug. 20–Sept. 25

One bull youth hunt by permit	YM541	Aug. 20–Sept. 25, Nov. 15–Jan. 31
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side	HT	Aug. 20–Sept. 25
One bull by registration permit	RM574	May be announced
One bull by Tier II permit	TM565/ 567/569	Dec. 15–Mar. 31
Nonresidents		
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side	HT	Aug. 20–Sept. 25

The population objective is 6,500-7,500 moose and the harvest objective is 310–600 moose annually.

The Board of Game has made positive customary and traditional use findings for the following moose populations in Unit 16B:

Area	Amount reasonably necessary for subsistence
16B Redoubt Bay drainages	10 moose
16B south of the Beluga River and north of Redoubt Bay	29–37 moose
16B north of the Beluga River	160–180 moose

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would dramatically increase harvest for moose in Unit 16B. The longer season would add five days to the current end of the hunting season which is a period when bull moose are entering the rut and are more susceptible to hunting. The shift from antler restricted bulls to any bull under general season regulations will result in a higher harvest of bull moose and the elimination of a protected segment of the population. With the liberal bag limit and the unit's proximity to the majority of the state's human population, this hunt would have the potential to attract a significant amount of hunter participation. The resultant higher harvest of bulls will reduce the bull:100 cow ratio, which will be evaluated using the most recent data.

If this proposal is adopted it will likely increase hunting pressure and user conflicts due to crowding. Initially the department would anticipate an increase in hunter success; however, this may lead to localized depletions of available bulls and may have an impact on the overall bull-to-cow ratios beyond levels that are considered optimal for management.

BACKGROUND: During 1992 the Board adopted antler restrictions for bull moose that began in fall 1993 for most of southcentral Alaska, including portions of Unit 16B. The antler restriction imposed in Unit 16B was a precautionary regulation to aid in enforcement of the regulation on the road system where it was needed. Antler restrictions were unnecessary for moose population management in Unit 16B.

Moose harvest in Unit 16B was highest in the mid-1980s, with a peak harvest of 615 reported in 1984 when the human population of Anchorage and the Matanuska-Susitna Valley was approximately 255,000 residents (currently estimated at 402,000 residents). Localized depletions of the moose population were noted in areas where hunter concentration was greater, such as Lake Creek, Alexander Creek, Skwentna, and the road system between Beluga and Tyonek. The moose population and harvest both declined sharply in the early 1990s and again in the early 2000s due to the impacts of severe snow winters (Figure 85-1).

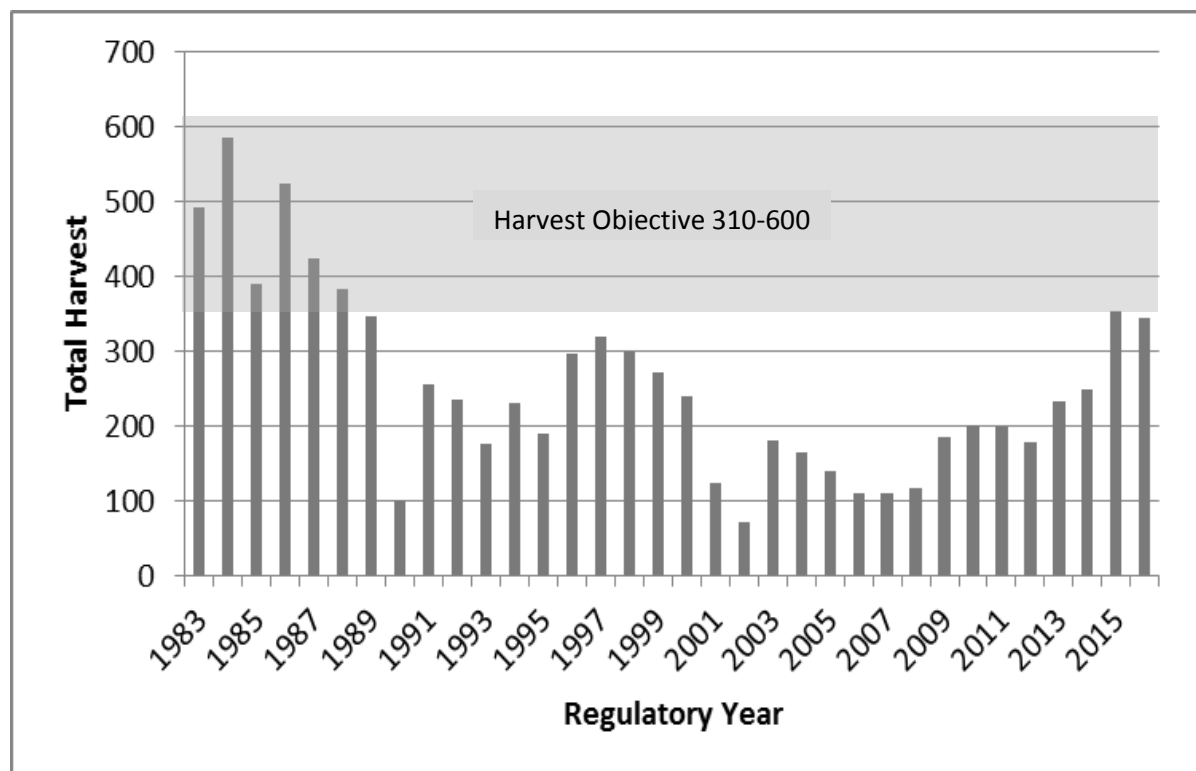


Figure 85-1. Total moose harvest in Unit 16B, RY1983–2016.

This moose population was identified for intensive management (IM) and recent population growth occurred in conjunction with predation control for bears and wolves. The predation control program began in 2004 with wolf reduction. That program successfully reduced the wolf population to within the management objective of between 22 and 45 wolves in Unit 16B and was suspended in 2014. Black bear control was initiated in 2007 and brown bear control was initiated in 2011. The objective of the black bear control program was to reduce, by 60–80%, the population of black bears, which was estimated to be $3,500 \pm 300$ in Unit 16B in 2007. The

objective of the brown bear control program was to reduce, by 60%, the population of brown bears, which was estimated at 937 ± 313 in 2007. The IM abundance objective for 16B is > 1.0 moose/mi² (6,500–7,500 moose). Moose surveys in the southern portion of the unit in 2010, the middle portion of the unit in 2013, and the northern portion of the unit in 2014 suggested that the population is within the population objective. Due to the increases observed in the moose population, and the ineffectiveness of the bear control programs, managers suspended the bear control programs in 2016.

Hunter effort averaged 1,336 hunters between 1983–1989. As a result of the moose population declines of the late 1990s and early 2000s the general season was closed in 2001 and 2002 and again from 2006 through the 2008 season. The resident only general season returned in 2009 and a small nonresident season opened in 2011. In 2013 nonresident and resident seasons were aligned and in 2014 two new draw hunts for any bull were implemented. As a result of these changes hunter effort has increased over the past ten years. When the moose population was below objectives, the department received some reports of concerns about increased effort making moose hunting difficult for residents of the area. The department has not heard complaints of overcrowding or user conflicts since the population and opportunity have increased, however, some of those concerns may persist (Figure 85-2).

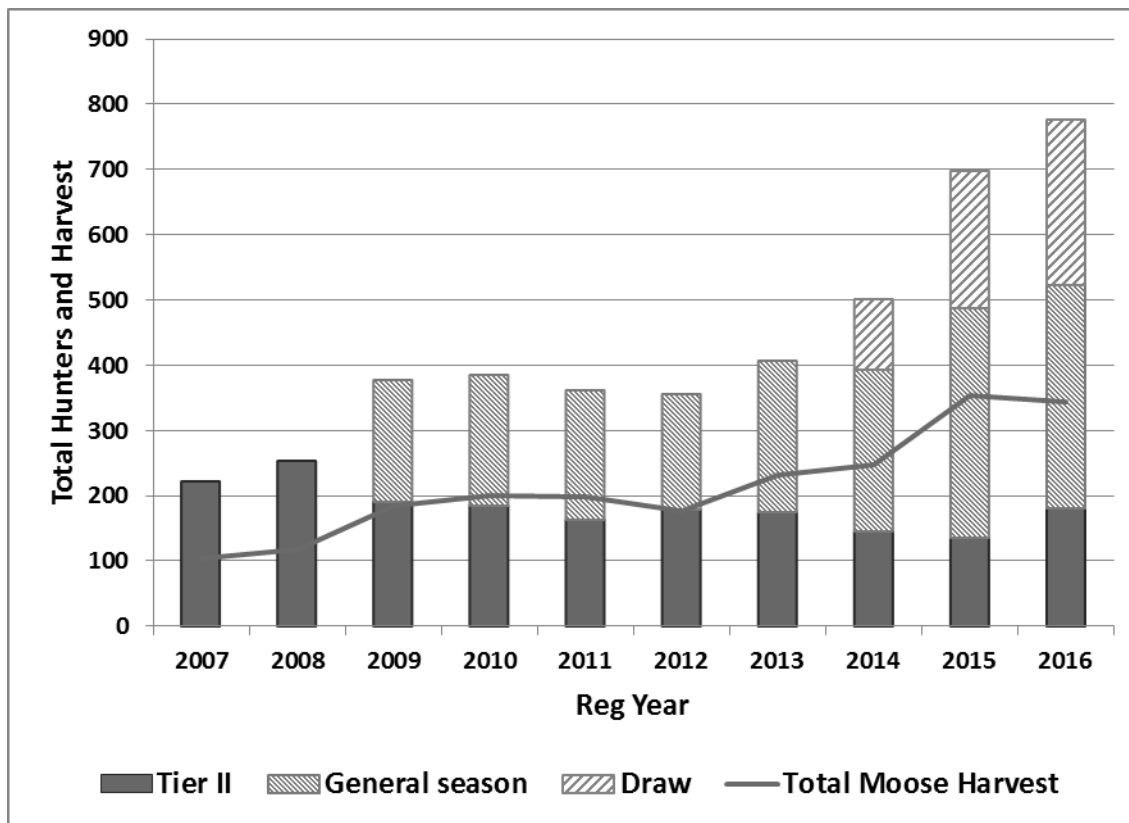


Figure 85-2 Total hunter effort and harvest in Unit 16B, 2007–2016.

The department attempts to obtain moose population information annually from Unit 16B. However, due to weather and staff limitations, surveys are not always able to be conducted. This real limitation in obtaining recent population data inhibits the department's ability to quickly detect impacts of changes to the season and bag limit, aside from annual harvest rates. This challenge in obtaining the data necessary in evaluating the effects of liberalizations is an additional reason for a cautious approach in regards to these liberalizations.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the proposal does not create biological concerns for the moose population in Unit 16B, which can be sustainably managed under the current or the proposed regulations. The record should show that the board discussed how the current or proposed regulations provide a normally diligent person with a reasonable expectation of success in harvesting a moose for subsistence uses.

The proposed liberalization in season and in bag limit makes it difficult to predict the increased hunter participation and subsequent harvest. Due to this unpredictability the department recommends if the board adopts this proposal to use a cautious approach of either a longer season or a change in the bag limit only at this time.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 86 – 5 AAC 92.044. Permit for hunting bear with the use of bait or scent lures. Shorten the season for black bear baiting in Unit 16.

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the fall bear baiting season in Unit 16, effectively reducing the black bear baiting season to April 15–June 30.

WHAT ARE THE CURRENT REGULATIONS?

- Bear baiting is allowed in Unit 16 except Denali State Park, April 15–October 15.
- The bag limit for black bears in Unit 16 is three bears, and a general season harvest ticket is required.
- A person may not have more than two bait stations established with bait present at any one time, except that guides may operate up to 10 at a time in a guide use area for which they are authorized to conduct big game hunting services.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted this proposal would remove the fall black bear baiting season which would reduce the season by three and a half months. The only baiting opportunity in Unit 16 would be relegated to the spring hunt period (April 15–June 30) and the change would have negligible effect on the bear population.

BACKGROUND: As a component of the predation control program in Unit 16, fall bear baiting began in 2007 with a season of August 10–October 15. In 2009 the fall season was extended to July 1–October 15. At that time hunters interested in participating in the program were required to obtain a predator control permit. Also under that program permittees were allowed to take any bear including cubs and sows with cubs.

Prior to control, line-transect surveys for bears in Unit 16B showed a black bear population of $3,500 \pm 300$. The goal of the bear reduction program was to reduce the black bear population to 600–800 bears within the predation control area. Bear harvests increased initially under the program but have since returned to their pre-control levels (Figure 86-1). Modelling by the department showed that the predator control program had little effect on the black bear population in Unit 16 and has been suspended.

On average 69% of black bears are harvested in the spring and 31% are harvested in the fall (2012–2016). Females comprised 38% of the harvest during this period. The percent females in the harvest vary annually and long-term trend data from 1973 through 2016 do not show a strong linear increase. For 2012–2016 an average of 86 black bears were harvested in the fall – 13 of these were harvested at bait stations.

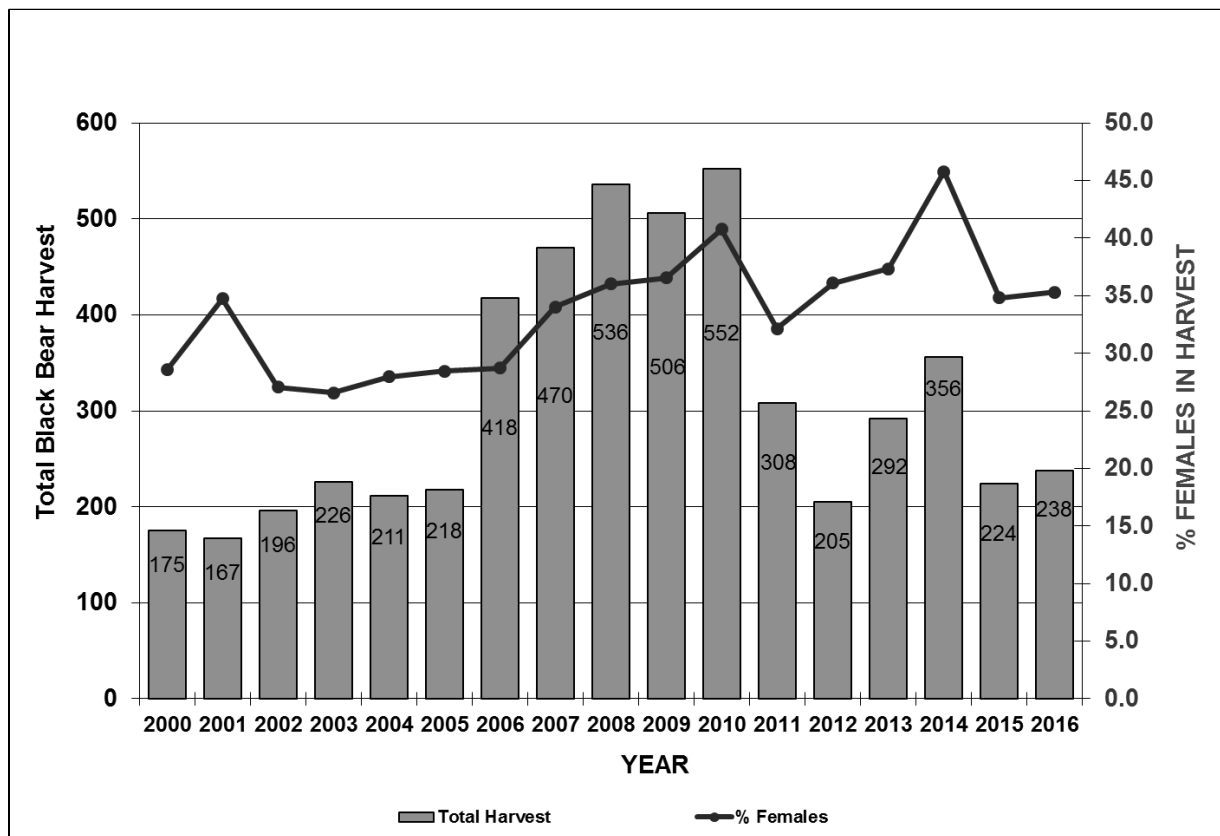


Figure 86-1. Unit 16 black bear harvest and percent females in harvest, 2000–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the department has not identified any biological concerns for the black bear population in Unit 16.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 87 – 5 AAC 92.044. Permit for hunting bear with the use of bait or scent lures. Prohibit the harvest of brown bears at black bear bait stations in Unit 16.

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? Prohibit the harvest of brown bears at black bear bait stations in Unit 16.

WHAT ARE THE CURRENT REGULATIONS?

- The annual bag limit is one brown bear in Unit 16A, and two bears in Unit 16B.
- Brown bears may be taken over bait from April 15–June 30 and from July 1–Oct. 15, with the appropriate bait registration permit. Denali State Park in Unit 16A is excluded from bear baiting.
- There is no closed season with the exception of within one mile of the mouth of Wolverine Creek in Unit 16B (Season dates: Sept. 15–May 31).
- No resident tag is required.
- Cubs in the first or second year of life and sows with cubs in the first or second year are not legal for harvest.
- Brown bears in Unit 16 must be sealed.
- Brown bears harvested in Unit 16B may be sold once they are sealed providing they have not been made into trophies.
- Brown bears may be taken at bait stations the same day a person has flown providing the person is at least 300 feet from the airplane. National Park Service lands are excluded from this provision.
- A person may not have more than two bait stations established with bait present at any one time, except that guides may operate up to 10 at a time in a guide use area for which they are authorized to conduct big game hunting services.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted this proposal would likely reduce the harvest of brown bears as hunters switch to methods that do not involve bait and this method of harvest for archery hunters is lost. Hunters engaged in black bear baiting are likely to be disturbed by brown bears, and their baiting efforts disrupted.

BACKGROUND: The harvest of brown bears at bait stations under hunting regulations was allowed in Unit 16 beginning in regulatory year 2013. The average harvest of brown bears for the 10 years before bait was allowed is 113 and average harvest of brown bears since bait was allowed (2013–2016) is 108 (Figure 87-1).

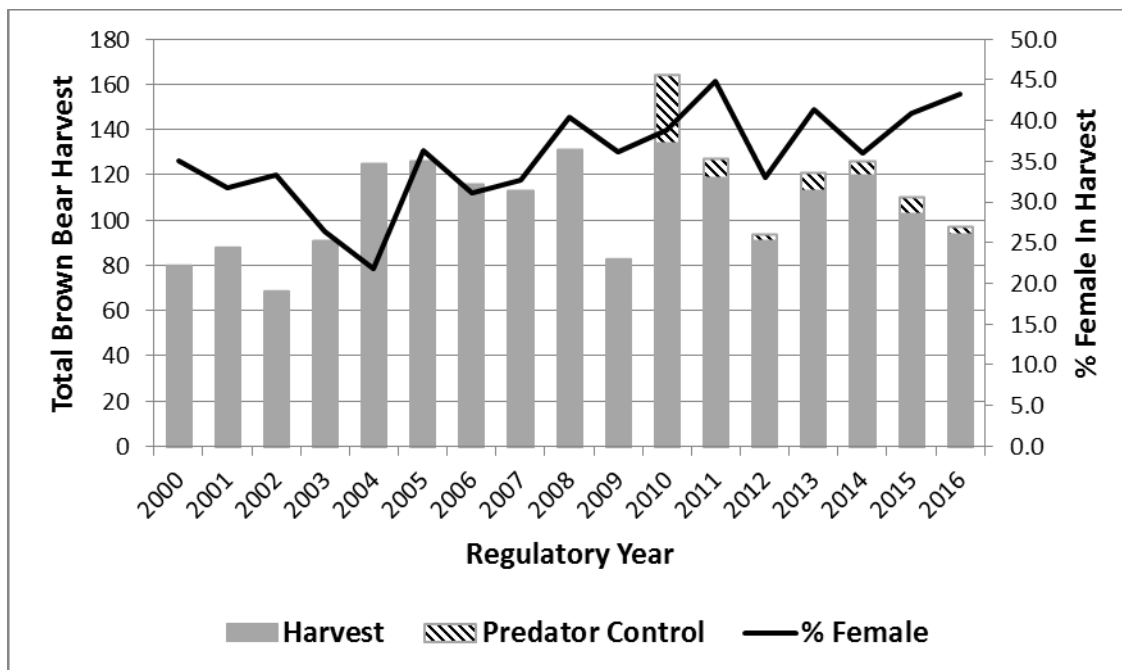


Figure 87-1. Unit 16 Brown bear harvest, control take, and percent females in harvest, RY2000–2016.

Since 2013, 37% of the brown bear harvest has occurred at bait stations (Figure 87-2). It is unlikely that allowing the use of bait is increasing the harvest. However, baiting may have offset other methods of take.

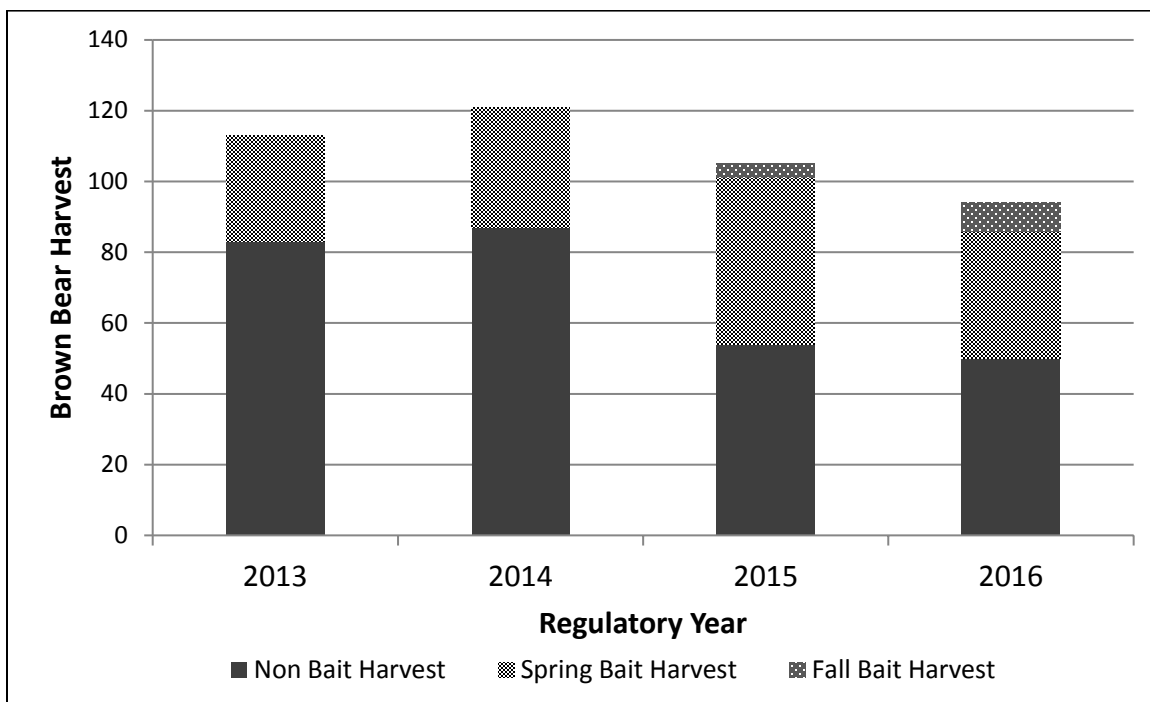


Figure 87-2. Unit 16 Brown bear harvest at bait stations vs. total harvest, RY2013–2016.

There has been no substantial shift observed in the average age or skull size of harvested bears (Figure 87-3). Since 2013, 50 brown bears have been harvested by archers in Unit 16: 43 of these were taken at bait stations. Guided hunters take more than 50% of the brown bears annually – 54% harvested at bait and 58% of brown bears not taken at bait.

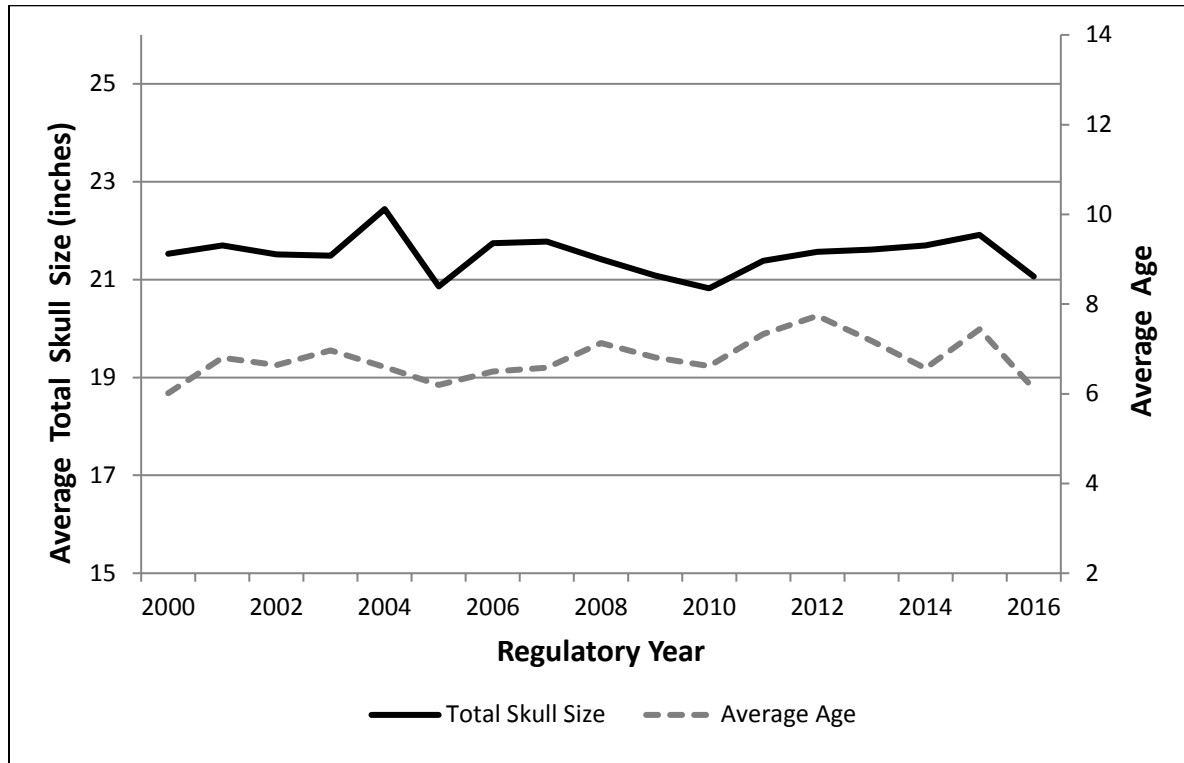


Figure 87-3. Unit 16 Brown bear average age and average skull size in harvest, RY2000–2016.

The 2007 brown bear population was estimated to be between 625 and 1,250 bears in Unit 16B; the midpoint of the estimate was 937. The proportion of females in the harvest has remained below 40%, and the average age of bears harvested and skull size have not decreased: this suggests that the brown bear population has not decreased in Unit 16B. Assuming a constant population of bears in 16B since 2007, average harvest rates would be between 8% and 16% with a midpoint average of 10% (Figure 87-4). Harvest rates at 6–10% can be sustainable providing that other parameters such as age of first reproduction, number of cubs produced, cub survival, or other vital rates do not change. Therefore the department does not believe that harvest levels have negatively influenced the population levels and it is likely the population is similar to the 2007 estimate.

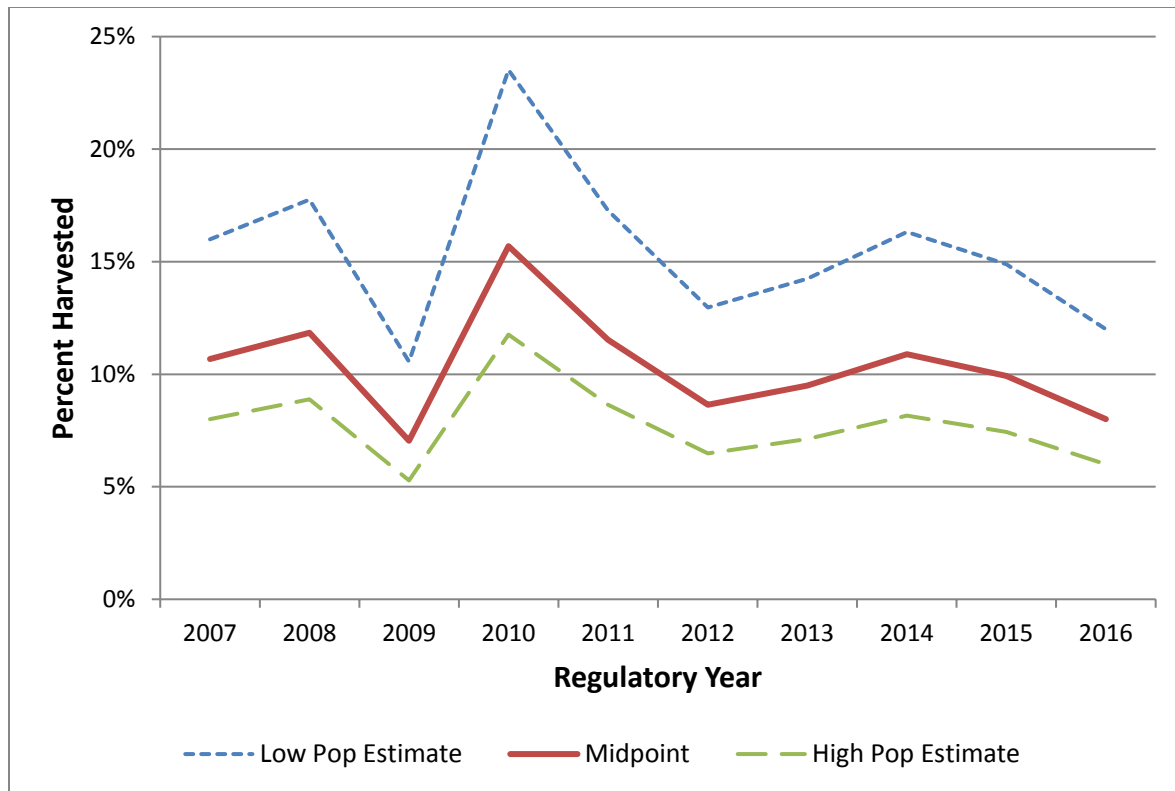


Figure 87-4. Unit 16B harvest rates for a constant population size, RY 2007–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the department has not identified any biological concerns for the brown bear population in Unit 16.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 88 – 5 AAC 85.020. Seasons and bag limits for brown bear. Shorten the season and reduce the bag limit for brown bear in Unit 16.

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? This proposal if adopted would shorten the brown bear hunting season in all of Unit 16 from no closed season to August 10–May 31. This proposal would also reduce the annual brown bear bag limit in 16B from two bears to one bear.

WHAT ARE THE CURRENT REGULATIONS?

- 16A one bear every regulatory year. No closed season.
- 16B within one mile of the mouth of Wolverine Creek, two bears every regulatory year. Season dates: September 15–May 31.
- 16B Remainder two bears every regulatory year. No closed season.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal if adopted would shorten the brown bear season in all of Unit 16 from no closed season to August 10–May 31 only. This proposal would also reduce the annual brown bear bag limit in 16B from two bears to one bear. The reduction in the bag limit from two bears every regulatory year to one bear every regulatory year will have minor impacts on the bear harvest, and the hides and skulls of bears harvested in the area will no longer be able to be sold. The reduced seasons will prevent hunters from harvesting bears opportunistically while in the field and will likely increase bears reported as taken in Defense of Life or Property (DLP).

BACKGROUND: The brown bear harvest regulations have a complex history. Season dates have been adjusted over time to allow hunters greater opportunity to take bears in the spring and to take bears during the general harvest moose season. More opportunity was created when the regulations were changed to allow hunters to take a bear each year and again by an increase in the bag limit in Unit 16B. Since RY 2011 there has been no closed season in Unit 16 (Figure 88-1).

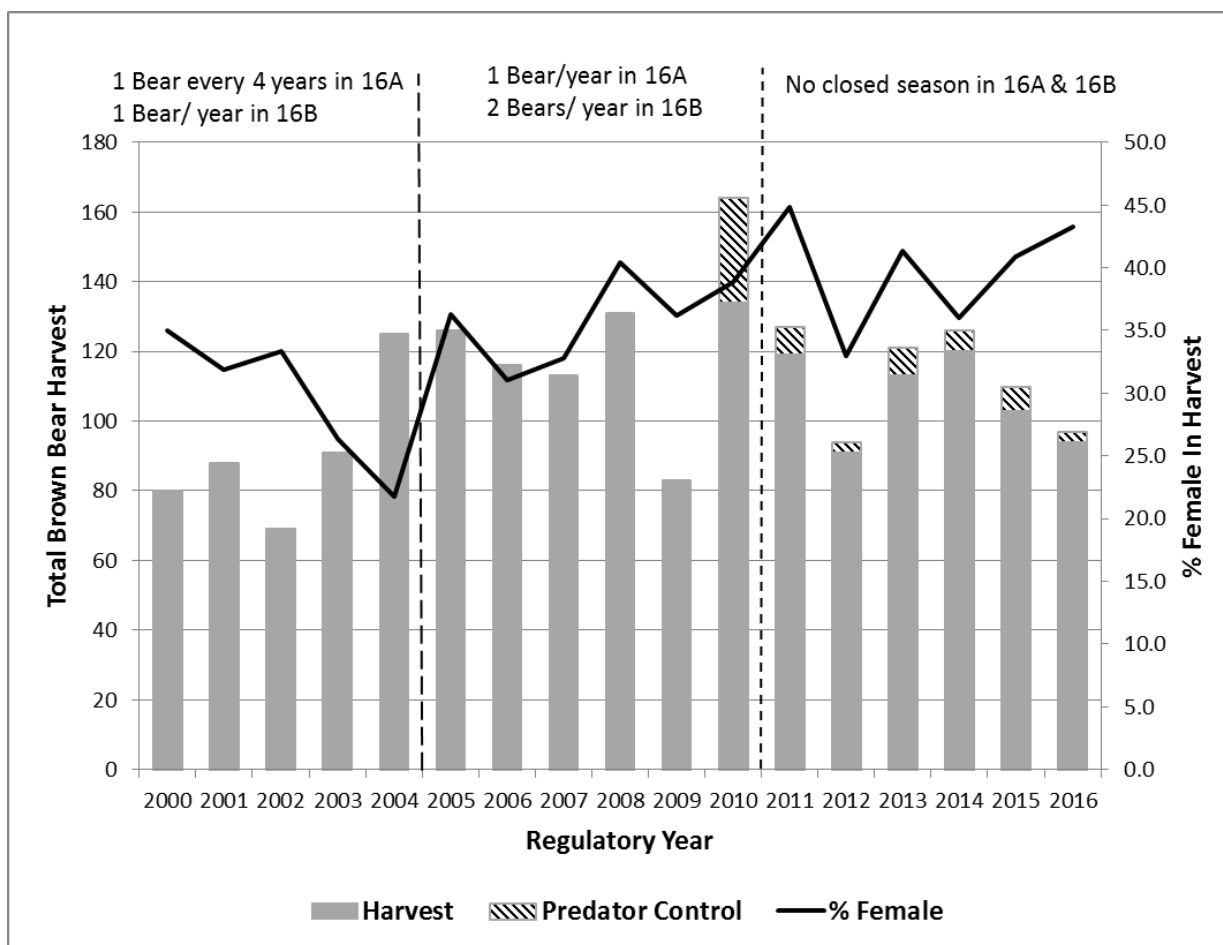


Figure 88-1. Unit 16A brown bear harvest, percent females in the harvest, and associated regulations, RY2000–2016.

The Unit 16 brown bear population was surveyed using the line-transect method in 2007. The population was estimated to be 937 ± 313 brown bears. As a component of the Intensive

Management Plan for Moose in Unit 16, a 960 square mile portion of Unit 16B was included in the predation control program by the board in the spring of 2010. The expedited regulation was approved in time for the spring brown bear season. That spring, permittees took 30 bears. Since that time, predation control accounted for fewer than six bears annually between 2011 and 2016. The department has no reason to believe that the brown bear population has changed substantially from 2007 when the last estimate was conducted. Modelling by the department completed in 2013 showed that the harvest had little effect on the brown bear population. In addition standard parameters used by the department such as skull size and age showed no trends indicating that there were large scale differences in the population (Figure 88-2).

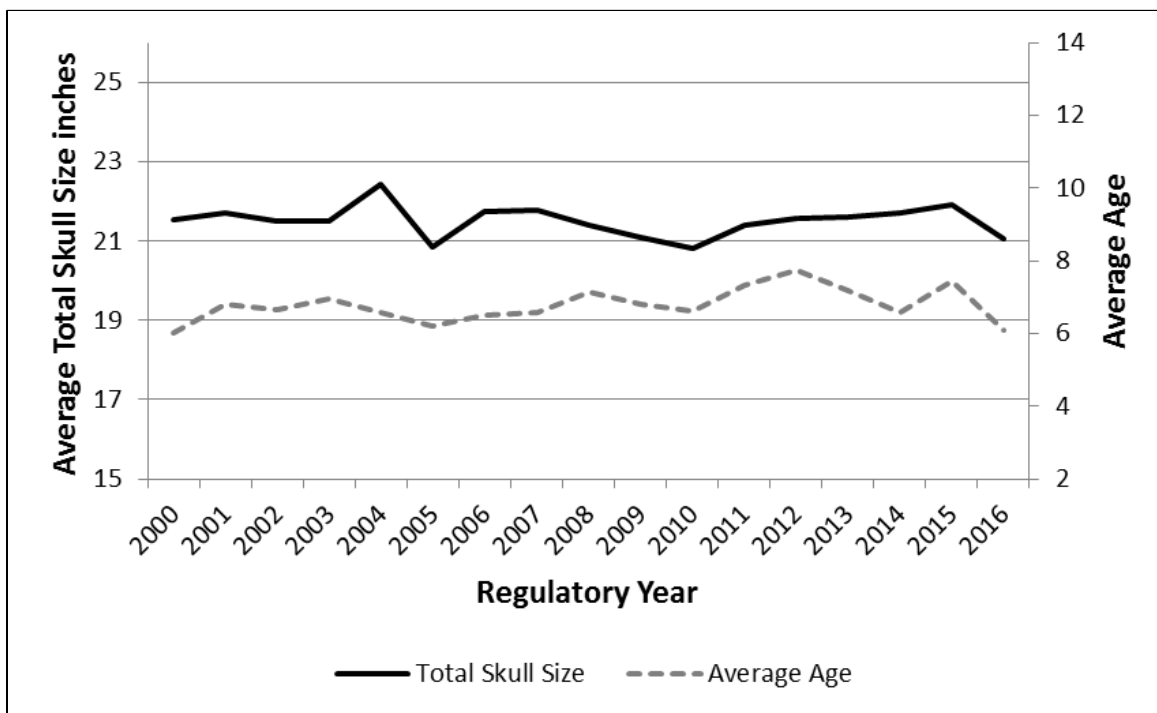


Figure 88-2. Unit 16 average brown bear skull size and age, RY 2000–2016.

Since 2005 the maximum number of people who harvested two brown bears in a regulatory year is seven and the average is three. The two bear bag limit – including the provision for the sale of hides and skulls – has a minimal impact on the total harvest (Table 88-1).

Table 88-1. Unit 16 brown bear harvest by regulatory year and the number of hunters who harvest more than one bear, RY2005–2016.

Regulatory Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Harvest	126	116	113	131	83	135	119	91	113	121	105	94
# Hunters who Harvested ≥ 2 Bears	4	4	2	4	3	3	7	2	4	2	4	1

The average harvest from 2000–2010 (open season approximately August 10–May 31) is 105 brown bears. Average harvest from 2011–2016 (no closed season) is 107 bears. Since 2010

when the season went to no closed season, 72% of the harvest has occurred between August 10 and May 31.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the department has not identified any biological concerns for the brown bear population in Unit 16.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 89 – 5 AAC 92.122. Intensive Management Plan VI. End the predator control program for black and brown bear in Unit 16.

PROPOSED BY: David McHoes

WHAT WOULD THE PROPOSAL DO? This proposal would end the bear control portion of the Unit 16 Intensive Management (IM) plan, thus eliminating all methods and means allowed only under the IM plan for harvesting bears.

WHAT ARE THE CURRENT REGULATIONS?

Regulations specific to bear control (which is currently inactive)

For black bears:

- In the predator control area, which includes all non-federal land in Unit 16B and a portion of Unit 16A (see Figure 89-1), all black bears are legal for harvest, including cubs and sows with cubs.
- There is no annual limit to the number of black bears a permittee may take.
- A permit (ML202 and ML212) is required and available to all residents at least 16 years old.
- Brown bears caught in black bear snares outside of the brown bear removal area must be reported to the department at which time the department may release the bears or direct the permittee to take the bears.

For brown bears:

- Brown bear predation control is limited to the brown bear removal area within Unit 16B (see Figure 89-1). It allows for the taking of all bears except cubs of the year and sows accompanied by cubs of the year.
- There is no annual limit to the number of brown bears a permittee may take.
- A permit (MB202 and MB212) is required and available to all residents at least 16 years old.

For both black and brown bear permits:

- Permittees may use snares with a permit. This provision requires department directed orientation and permittees using snares must notify the department when they will be conducting snaring activities.
- Helicopters may be used to transport hunters, their equipment, and bears provided the pilot has a permit from the department.

Other bear harvest regulations specific to Units 16A and 16B.

For black bears:

- The limit is three bears annually in both 16A and 16B.
 - There is no closed season with the exception of within one mile of the mouth of Wolverine Creek in Unit 16B (Season dates; Sept.15–May 31).
- Black bears may be taken over bait from April 15–June 30 and from July 1–Oct. 15, with the appropriate bait registration permit. Denali State Park in Unit 16A is excluded from bear baiting.
- Cubs of the year and sows with cubs of the year are not legal for harvest.
- Black bears in Unit 16 must be sealed, and may be sold once they are sealed providing they have not been made into trophies.
- Black bears may be taken at bait stations the same day a person has flown providing the person is at least 300 feet from the airplane. National Park Service lands are excluded from this provision.

For brown bears:

- The annual bag limit is one brown bear in Unit 16A, and two bears in Unit 16B.
- Brown bears may be taken over bait from April 15–June 30 and from July 1–Oct. 15, with the appropriate bait registration permit. Denali State Park in Unit 16A is excluded from bear baiting.
- There is no closed season with the exception of within one mile of the mouth of Wolverine Creek in Unit 16B (Season dates; Sept. 15–May 31).
- No resident tag is required.
- Cubs in the first or second year of life and sows with cubs in the first or second year are not legal for harvest.
- Brown bears in Unit 16 must be sealed.
- Brown bears harvested in Unit 16B may be sold once they are sealed providing they have not been made into trophies.
- Brown bears may be taken at bait stations the same day a person has flown providing the person is at least 300 feet from the airplane. National Park Service lands are excluded from this provision.

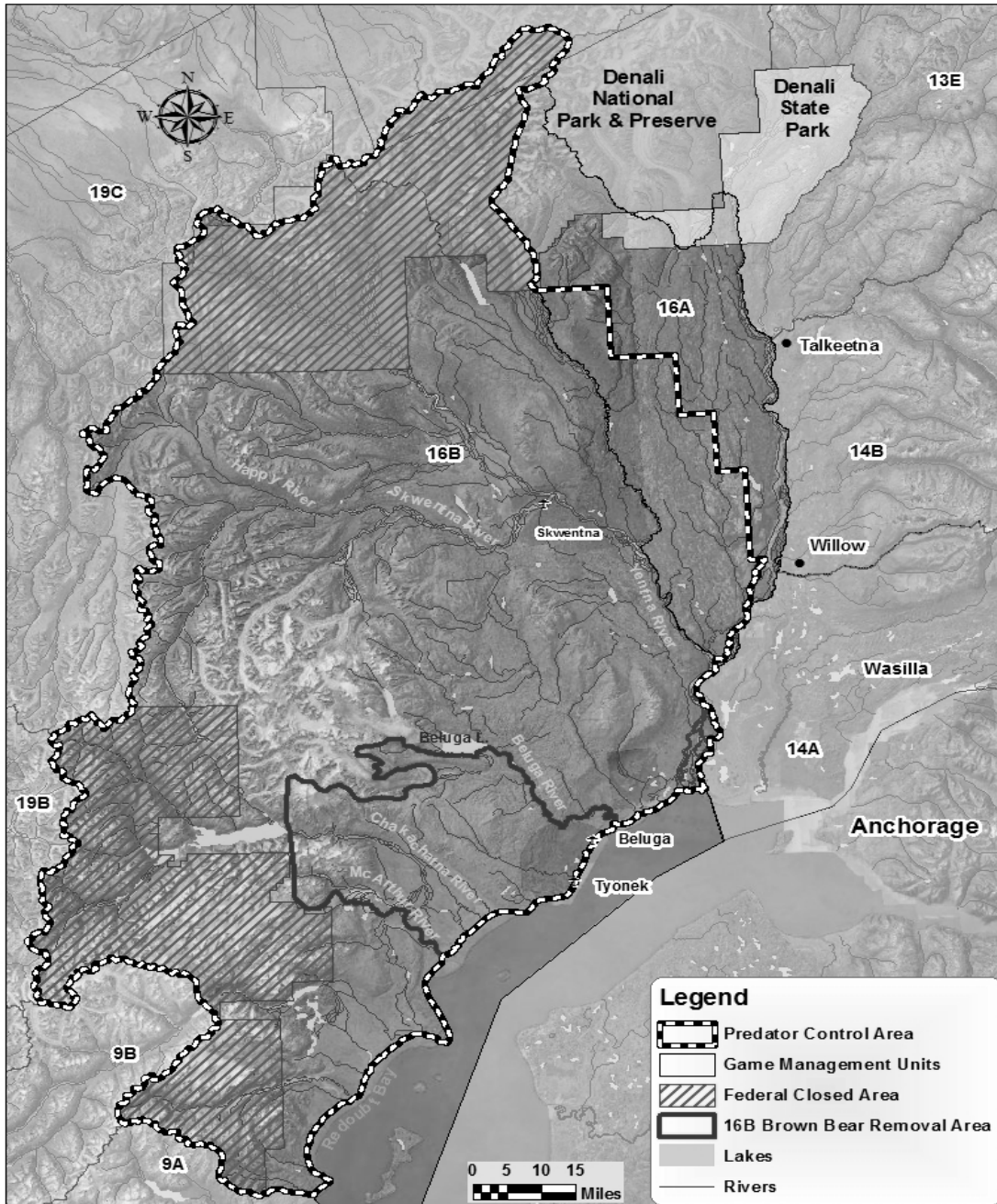


Figure 89-1. Unit 16 Predator control area and the 16B brown bear removal area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would have little effect as the intensive management program is currently inactive. Many of the provisions originally written into the predation control plan such as taking brown bears at black bear bait stations, fall baiting seasons, and taking bears the same day a permittee has flown, have been incorporated into accepted practices not just in Unit 16 but in other areas of

the state as well. This proposal would prevent reactivating the program without having the Board approve a new IM plan.

There are additional methods allowed for the harvest of bears in Unit 16 which will be nullified if the program is removed from regulation. Hunters are currently allowed to use snowmachines to position themselves to take individual bears for harvest, and those bears may be taken from stationary snowmachines. If this program is removed from regulation the use of snowmachines will no longer be allowed.

BACKGROUND: The intensive management (IM) plan for Unit 16B was first approved by the board in 2004 to bring the moose population into objective (6,500–7,500 moose). The first action taken was a wolf control program which began in the winter of 2004 which was expanded in 2006 to include a portion of Unit 16A.

In 2007 the program was modified by the board to authorize black bear control. The black bear population was estimated to be $3,500 \pm 300$ bears in 2007. The goal of the black bear control program was to reduce the population by 60–80%. The predation control program was modified again in 2011 to include brown bear control in a 960 square mile portion of unit 16B. The brown bear population was estimated to be 937 ± 313 in 2007. The goal of the brown bear control program was to reduce the population by 60%. Both black and brown bear harvest increased initially in response to control efforts but returned to pre-control harvest levels after several years (Figures 89-2 and 89-3). Although bear harvest was high, the bear populations were not decreased enough to improve calf survival. Current harvests are at sustainable levels. In 2013 the wolf control area was reduced in size and completely suspended in 2014 due to meeting the reduction objectives. In 2016 the program was made inactive due to meeting the moose population and harvest objectives, and an inability to make sufficient progress towards meeting the IM objectives for bears.

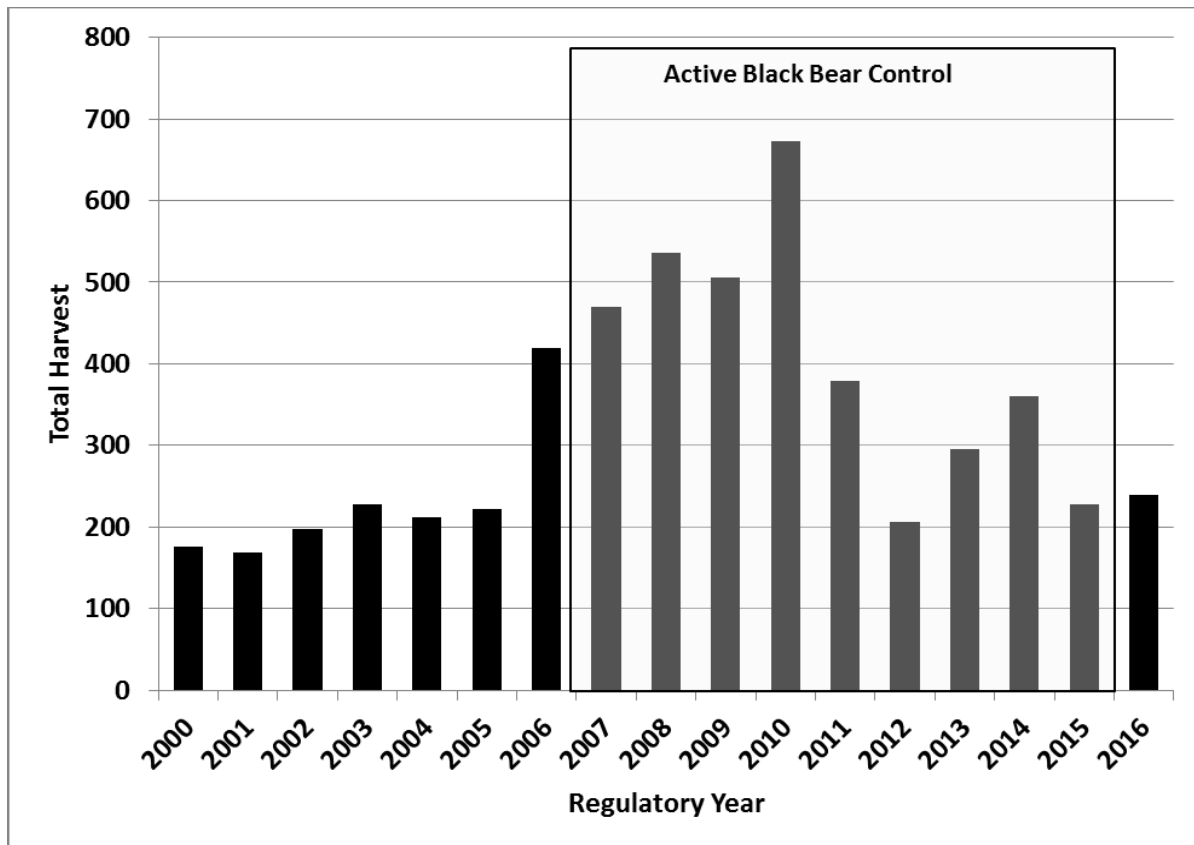


Figure 89-2. Unit 16 Black bear harvest, RY2000–2016.

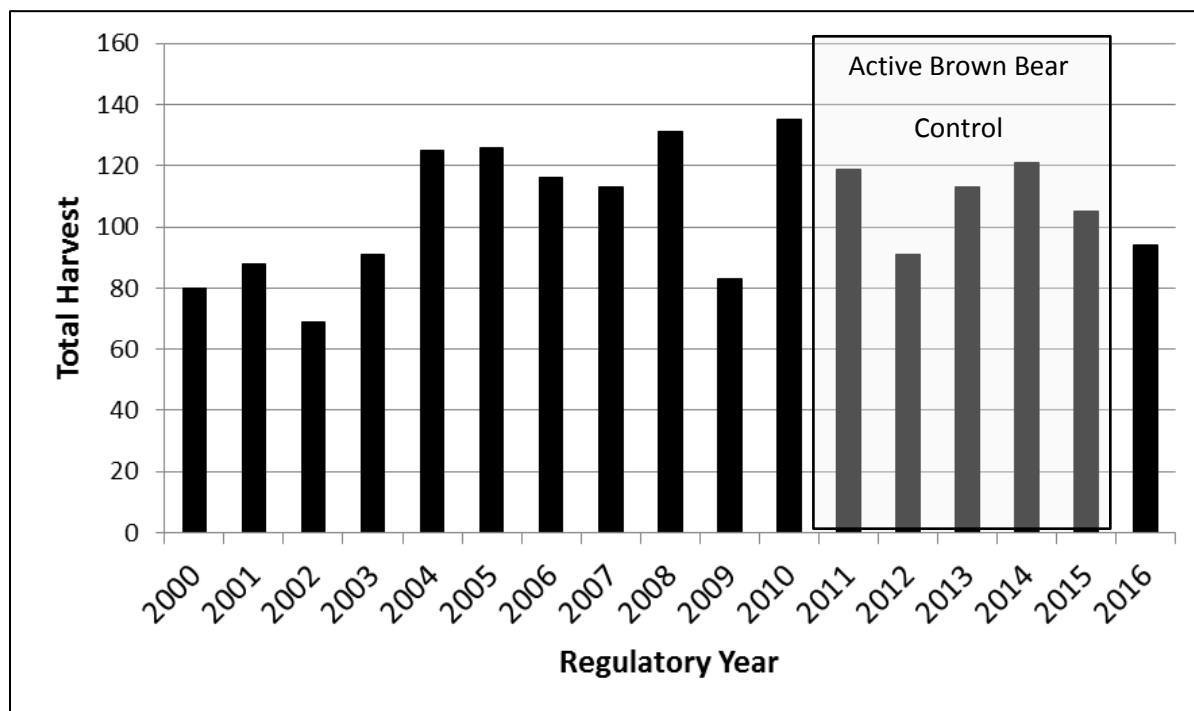


Figure 89-3. Unit 16 Brown bear harvest, RY 2000-2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because it has no biological concern. The IM program is currently inactive due to meeting both the population and the harvest objectives for moose, as well as an inability to meet bear reduction goals. The program is currently set to expire July 1, 2021. The department does not expect to reactivate the plan before it expires.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 90 – 5 AAC 92.095. Unlawful methods of taking furbearers; exceptions. Allow the harvest of beaver by firearms under a trapping license in Unit 16.

PROPOSED BY: Matanuska Valley Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would allow the harvest of beaver in Unit 16 with a firearm under a trapping license.

WHAT ARE THE CURRENT REGULATIONS?

- Trapping regulations allow beaver to be taken only by steel trap or snare from September 25–May 31; however, only submerged traps may be used from September 25–November 9.
- There is no bag limit for beaver under the current trapping regulations.
- There is no open hunting season for beaver in Unit 16.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal allows beaver to be taken during the open trapping season in Unit 16 from September 25–May 31 with a firearm.

Salvage may be difficult: beaver that are shot in open water may sink, thus making retrieval difficult. Without sealing requirements the additional legal incentive to salvage is absent, and tracking additional harvest under this method will not be possible.

BACKGROUND: The sealing requirement for beaver taken in Unit 16 was eliminated in 2011. The average annual harvest from 2001 through 2010 was 86 beaver. The department has issued an average of seven nuisance beaver permits per year during the last five years.

Currently beaver may be harvested with a firearm under a trapping license in Units 1–5, 8, 9, 12, 17, 18, 19, 20A, 20C, 20E, 20F, 21, 22, 23, 24, and 25. In the early 2000s, a hunting season for beaver was established in Units 18, 21A, 21E, 22, and 23 with no closures and no bag limit. The addition of a hunting season was in response to an increase in the number of nuisance beaver requests from a number of local communities (Unit 18) and apparent range expansion (Units 22

and 23). While some communities continue to consume beaver, most beavers are harvested for fur and as trapping bait.

The department does not have any conservation concerns with beavers in Unit 16. The amount of trapping effort appears to be just a fraction of what it was in the past, and harvest likely reflects that decline in effort. Observations of beaver sign during aerial surveys and activity as well as discussions with moose hunters, trappers, and department fisheries staff indicate that beavers are widely spread and abundant throughout most of the unit.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because it has not documented a biological concern for the beaver population in Unit 16B. Anecdotal information suggests that beaver remain abundant in the unit.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 91 – 5 AAC 99.025. Customary and traditional uses of fish and game population. Modify the amount reasonably necessary for subsistence for caribou and moose in Unit 13.

PROPOSED BY: Kenneth Manning.

WHAT WOULD THE PROPOSAL DO? Require the department to conduct a survey of sport, personal use and subsistence users residing in Units 7, 11, 12, 13, 14, 15, 16, and 20 to determine personal use and subsistence harvests of big game, fresh- and saltwater fish, and small game; revise the Amount Necessary for Subsistence for moose and caribou in Unit 13.

WHAT ARE THE CURRENT REGULATIONS? There is a positive customary and traditional (C&T) finding for moose in Unit 13 and the ANS is 300–600 moose (5 AAC 99.025(a)(8)).

There is a positive customary and traditional use finding for caribou in the combined areas of Unit 12 and Unit 13 (Nelchina herd) with an Amount Necessary for Subsistence (ANS) of 600–1,000 caribou (5 AAC 99.025(a)(4)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The department would have to collect and analyze harvest data and draft revised ANS figures for moose and caribou. There are no regulations directing the boards how to establish ANS findings; each board establishes ANS findings using the best available information, including various data sets (e.g., surveys, permit returns), public input, and the judgement and experience of board members.

BACKGROUND: Subsistence opportunities in Unit 13 for moose and caribou include the Copper Basin Community Subsistence Harvest Hunts. Additional subsistence opportunity for caribou is provided under the Tier I registration permit hunt as well as a federal hunt open to residents of Units 11, 12, 13, 20A and 20D.

The department currently has several programs administered by different divisions and different regional offices to collect harvest data in Units 7, 11, 12, 13, 14, 15, 16 and 20. State statute tasks the Division of Subsistence with the mission to scientifically gather, quantify, evaluate and report information about customary and traditional uses of Alaska's fish and wildlife resources (AS 16.05.094). The division employs in-person survey methods to gather and report data on fish and wildlife harvests by Alaskans for home use.

Between 2010 and 2013 the Division of Subsistence conducted harvest assessment research projects in the Copper Basin communities of Chistochina, Mentasta Lake, Mentasta Pass, Slana/Nabesna Road, and Copper Center/Silver Springs (2010); Tok (2011); Chitina, Gakona, Kenny Lake/Willow Creek, McCarthy (2012); and Glennallen, Gulkana, Lake Louise, Paxson, Tazlina, Tonsina, Mendeltna, Nelchina and Tolsona (2013); . Based on 2010 census data, roughly 7,500 households live in Units 11, 12, 13, 14, 15, 16 and 20. Efforts to achieve a statistically significant sample of those households might require 5,000 successful survey attempts.

The Divisions of Subsistence, Wildlife Conservation, Sport Fisheries and Commercial Fisheries also administer programs to permit and quantify harvest and participation in subsistence, sport and personal use hunting and fishing opportunities. In addition, the Division of Sport Fish conducts a mail-out sport fishing harvest survey annually.

Table 91-1. Summary of moose and caribou harvest data collected by Division of Wildlife Conservation in Units 11, 12, 13, 14, 15, 16 and 20.

Table . 2016 Moose & Caribou Harvest, GMUs 11, 12, 13, 14, 15, 16, 20										
		Targeted Hunt	Community	Draw		General		Registration		Tier II
		Residents	Residents	Non-Residents	Residents	Non-Residents	Residents	Non-Residents	Residents	Residents
Caribou		0	363	17	1954	17	16	107	3538	
Moose		97	199	29	1060	345	3148	26	275	86

DEPARTMENT COMMENTS: The department is **NEUTRAL** on revising the ANS for moose and caribou for Unit 13 and notes that the board does not have administrative or budgeting authority to require the department to conduct harvest surveys.

COST ANALYSIS: Approval of this proposal is not expected to result in significant additional direct cost to private parties to participate in these hunts.

PROPOSAL 92 – 5 AAC 85.025. Hunting seasons and bag limits for caribou; 85.045. Hunting seasons and bag limits for moose; and 92.072. Community subsistence harvest hunt area and permit conditions. Eliminate the community subsistence harvest hunts for moose and caribou and increase draw permits.

PROPOSED BY: Anchorage Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the Copper Basin community subsistence harvest hunts (CSH) for moose (CM300, CM301) and caribou (CC001). The number of “any bull” draw permits (DM324) for Unit 13 would be increased from five to 100. *Note: The board held a special meeting in March 2017 where they addressed 44 proposals to modify or eliminate the CSH moose and caribou hunts. The intended effect of this proposal was addressed by the board at the March 2017 meeting.*

WHAT ARE THE CURRENT REGULATIONS?

Nelchina Caribou

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
- CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- One drawing permit hunt for caribou in Unit 13 (DC485) is available for resident hunters. Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.

- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.
- Up to 400 caribou can be taken by all CSH caribou groups combined.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

In addition to regulations, the board has approved the following CSH hunt conditions under the department's discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended when the hunt was created, specified in the board's finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration caribou hunts, or hold general season caribou harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Units 11, 13, and that portion of Unit 12 south of the Little Tok River).
- After the CSH hunt has ended, if the household was unsuccessful in filling the CSH bag limit during the CSH hunt, household members may hunt in areas outside the CSH hunt area with general caribou harvest tickets or other state caribou permits where the bag limit is greater than one caribou per household.
- No member of the household may hunt moose outside of the CSH hunt area.
- Any member of the household may harvest the caribou, and any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the heart, liver, kidneys, and fat, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Prior to October 1, meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.
- The one caribou bag limit may be changed by Emergency Order to one bull or one cow, or the hunt may be closed by Emergency Order.

Units 11, 12, and 13 Moose

- The Board of Game has made a positive C&T finding for moose in Unit 11 and found that 30–40 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 12, and found that 60–70 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose.

- Resident hunters with CSH harvest reports may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines on at least one side in Unit 11).
- Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood.
- CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines on at least one side in Unit 11).
- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- Resident hunters may apply for a drawing permit hunt for one antlerless moose (no take of calves or cows accompanied by a calf; DM325). Season dates for DM325 are October 1–31 and March 1–31; up to 200 permits may be issued. 10 permits were issued in 2017.
- Resident hunters may apply for a drawing permit for one bull (DM324), with season dates of September 1–20. Up to five permits may be issued, and all 5 permits were issued in 2017.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents with a drawing permit (DM335–DM339) have a bag limit of one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one

antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20.

In addition to regulations, the board has approved the following CSH hunt conditions under the department’s discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended for people to follow when the hunt was created, specified in the board’s finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration moose permits, or hold general season moose harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Units 11, 13, and that portion of Unit 12 south of the Little Tok River).
- Hunters must have a locking-tag in their possession to harvest an “any bull” moose, and are required to affix the locking-tag to the main-beam of one antler immediately upon harvest of a moose that does not conform to the Unit 13 general season antler restrictions. Hunters that do not have a locking tag in their possession must harvest only bulls that conform to the Unit 13 general season antler restrictions.
- Any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the head, heart, liver, kidneys, stomach, and hide, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The board may not be providing a reasonable opportunity for the communal pattern of use that was adopted into regulation, and community hunts in the Copper Basin Subsistence hunt area would not be available. Moose and caribou hunting opportunities would only be provided for the individual pattern of use through harvest ticket, registration, and drawing opportunities.

Hunting opportunity on the mid-aged cohorts of moose protected by general season antler restrictions would be reallocated to 100 draw permits for Unit 13 which would be issued for individual subunits – similar to the way that “any bull” quotas are delegated by subunit now. Hunting pressure would likely decrease on the mid-aged cohorts of moose protected by general season antler restrictions.

BACKGROUND: In 2006-170-BOG and 2011-184-BOG, the board recognized that there are two basic use patterns within a range of subsistence uses for moose and caribou in Unit 13: 1) a pattern for individuals, families, and other social groups [both within and outside the local area 2011-184-BOG]; and 2) “the community-based pattern established by the Ahtna” (2006-170-BOG). The board recognized that the community-based pattern has been “adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents.”

To address these patterns of use the BOG created the CSH moose and caribou hunts to provide a reasonable opportunity for the community-based pattern in addition to existing regulatory options that provide reasonable opportunities by individual hunters and families who chose not to follow the community-based pattern established by the Ahtna.

Caribou

In March 2009 the board established the current ANS of 600–1,000 caribou for the Nelchina caribou herd (NCH). When the Nelchina harvest quota is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus is comprised of resident-only hunts, including Tier I hunts (i.e., Copper Basin CSH hunt CC001 and Tier I registration hunts RC561 and RC562) and drawing permit hunts. The board has not established a harvest quota threshold that would allow nonresident hunting opportunity when the threshold is exceeded.

Since 2009, the NCH has increased in population size, as has participation in the Tier I hunt and the CSH hunt (Table 92-1). The department currently issues the maximum number of permits for the drawing hunt annually (5,000 drawing permits). Nonresident hunting opportunity has not been offered since 1981. The number of CSH caribou hunting harvest tickets/reports issued annually has increased from 477 in 2009 to 1,004 in 2017 (Table 92-2). Similarly, the number of Tier I registration permits issued annually also increased from 500 in 2009 to 8,444 in 2017. It should be noted that not every permit or harvest ticket/report equates to a hunter in the field or hunter success.

The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modeling suggested that the population size is comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

Prior to the establishment of the CSH in 2009, subsistence hunting of Nelchina caribou in Unit 13 was allocated through a registration hunt open only to local residents or a Tier II hunt (most years from 1990–2008). Other hunting opportunity was allocated through a drawing hunt (1983–1989).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season (RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018.

Table 92-1. Unit 13 state Nelchina caribou hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480–483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797

2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
2012	5,045	2,542	402	150	3,001	1,023	5,500	8,449	4,430
2013 ^c	6,880	1,573	689	114	5,000	609	2,500	12,567	2,645
2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241
2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f

^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15.

^d State hunts (fall season) were extended by Emergency Order from September 20 to September 30; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20 to September 30.

^f Harvest is ongoing.

Table 92-2. Nelchina caribou CSH participants in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Individuals	Number of Permits Reported Hunted
2009	1	27	477	-	288
2010 ^a	-	-	-	-	-
2011	6	29	322	636	176
2012	17	30	402	824	238
2013	28	40	689	1,424	308
2014	25	35	569	1,121	266
2015	26	39	659	1,359	330
2016	45	45	1,011	2,272	562
2017	51	47	1,085 ^b	2,507	274 ^c

^a The community hunt was not offered in regulatory year 2010.

^b Permits were not issued for every household because some were FTR.

^c The hunt is ongoing.

Moose

In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity with an earlier starting date for the CSH hunt. Board finding 2015-209-BOG recommends that the department establish individual quotas for each subarea of the Copper Basin community subsistence hunt for the moose that do not meet harvest ticket antler restrictions in Units 11 and 13, and attempt to achieve the quota for each subarea regardless of whether or not the total harvest exceeds the total allocation for the CSH program.

Since the CSH hunt was established, the number of individuals enrolled in the hunt has increased (Table 92-3). In 2009 there was one CSH moose group with 378 permitted participants, which

increased to 45 groups with 2,066 permitted participants by 2013. Currently there are 83 groups with 3,136 permitted participants. The number of hunters that reported hunting increased from 293 in 2009 to 842 in 2013; since 2013 the number of hunters that reported hunting has fluctuated up and down between 607 in 2014 and 942 in 2016.

Since 2009, CSH hunters have harvested an average of 144 moose annually within the Copper Basin Subsistence hunt area (including Unit 11 and a portion of Unit 12), including an average of 85 bulls that do not meet general season antler restrictions (Table 92-3). General season harvest hunters in Unit 13 harvested an average of 660 moose annually during the same period.

Since 2016, five “any bull” draw permits have been issued annually in Unit 13 (DM324). Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

Bull-to-cow ratios are close to management objectives in most subunits (Table 92-4). Moose harvest in Unit 13 has been increasing in recent years (Figure 92-1). Harvest does not appear to be having an adverse effect on bull:cow ratios anywhere other than in 13A, where the bull:cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 20 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull:cow ratios compared to other subunits.

Table 92-3. Participation and harvest in the CSH moose hunts in Units 11, 13, and a portion of 12 in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Permit Holders	Number of Hunters Reported Hunting	Total Number of Moose Harvested ^a
2009	1	19	246	378	293	100 (68 any bulls)
2010 ^b	-	-	-	-	-	-
2011	9	32	407	753	312	86 (59 any bulls) ^c
2012	19	30	459	961	358	98 (73 any bulls) ^c
2013	45	39	955	2,066	842	156 (81 any bull) ^c
2014	43	35	893	1,771	607	120 (77 any bull) ^c
2015	43	46	1,039	1,984	621	171 (92 any bull) ^c
2016	73	47	1,527	3,023	942	201 (114 any bull) ^c
2017	83	51	1,680	3,136	773	184 (99 any bull) ^c

^a Additional “any-bulls” are harvested in the area under federal permits.

^b The community hunt was not offered in regulatory year 2010.

^c Emergency orders were issued to prevent any-bull harvest from exceeding the quotas for some subunits.

Table 92-4. Unit 13 moose population objectives and 2016 estimates

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030

Bull:cow					
Objective	25:100	25:100	25:100	25:100	25:100
2016 estimate	20	34	34	72	35

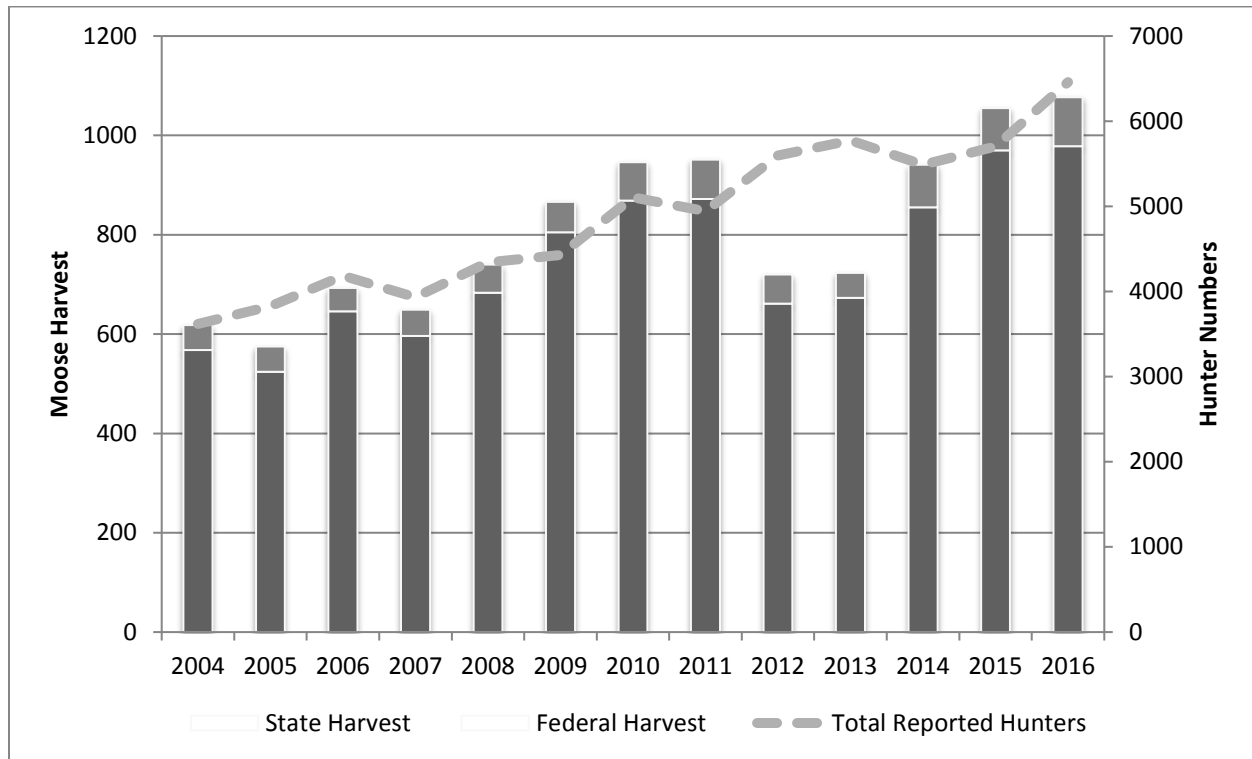


Figure 92-1. Total moose harvest and hunter participation in Unit 13, RY2004-2016.

DEPARTMENT COMMENTS: The department is neutral on the allocation of caribou and moose harvests in the Copper Basin Subsistence hunt area, At the special meeting in March 2017, the board passed Proposal 20, as amended, which retained the CSH for moose and allocated 100 moose that do not meet antler restrictions to CSH participants by applying Tier II scoring criteria. The board's action on Proposal 20 does not come into effect until the 2018/2019 regulatory year. Due to its action on Proposal 20, the board took no action on 14 other proposals to eliminate, restrict, reduce or otherwise modify the CSH hunts for moose in Unit 13.

At the same meeting the board passed Proposal 33, as amended, which retained the CSH for caribou and drawing hunts and modified the seasons for Tier I registration caribou hunts in Unit 13. The board's action on Proposal 33 does not come into effect until the 2018/2019 regulatory year. Due to its action on Proposal 33, the board took no action on 23 other proposals to eliminate, restrict, reduce or otherwise modify the CSH hunts for caribou in Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 93 – 5 AAC 85.025. Hunting seasons and bag limits for caribou; and 92.072.

Community subsistence harvest hunt area and permit conditions. Eliminate the community subsistence harvest hunt for caribou in Unit 13.

PROPOSED BY: Rebecca Schwanke

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the Copper Basin community subsistence harvest (CSH) for caribou (CC001). *Note: The board held a special meeting in March 2017 where they addressed 44 proposals to modify or eliminate the CSH moose and caribou hunts. The intended effect of this proposal was addressed by the board at the March 2017 meeting.*

WHAT ARE THE CURRENT REGULATIONS?

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits for Unit 13 are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 in Unit 13 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
- CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- One drawing permit hunt for caribou in Unit 13 (DC485) is available for resident hunters. Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.
- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.

- Up to 400 caribou can be taken by all CSH caribou groups combined.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

In addition to regulations, the board has approved the following CSH hunt conditions under the department's discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended when the hunt was created, as specified in the board's finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration caribou hunts, or hold general season caribou harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Units 11, 13, and that portion of Unit 12 south of the Little Tok River).
- After the CSH hunt has ended, if the household was unsuccessful in filling the CSH bag limit during the CSH hunt, household members may hunt in areas outside the CSH hunt area with general caribou harvest tickets or other state caribou permits where the bag limit is greater than one caribou per household.
- No member of the household may hunt moose outside of the CSH hunt area.
- Any member of the household may harvest the caribou, and any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the heart, liver, kidneys, and fat, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Prior to October 1, meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.
- The one caribou bag limit may be changed by Emergency Order to one bull or one cow, or the hunt may be closed by Emergency Order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The community hunt for caribou in the Copper Basin Subsistence hunt area would not be available; the board may not be providing a reasonable opportunity for the communal pattern of use that was adopted into regulation. Caribou hunting opportunities would only be provided for the individual pattern of use through registration and drawing opportunities. The proposal implies that, if this proposal is passed in conjunction with an alteration in Unit 13 proxy regulations, the communal pattern of use may be practiced under the other Tier I registration hunts (RC561 and RC562).

BACKGROUND: In 2006-170-BOG and 2011-184-BOG, the board recognized that there are two basic use patterns within a range of subsistence uses for moose and caribou in Unit 13: 1) a pattern for individuals, families, and other social groups [both within and outside the local area 2011-184-BOG]]; and 2) "the community-based pattern established by the Ahtna" (2006-170-BOG). The board recognized that the community-based pattern has been "adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents."

To address these patterns of use the BOG created the CSH moose and caribou hunts to provide a reasonable opportunity for the community-based pattern in addition to existing regulatory options that

provide reasonable opportunities by individual hunters and families who chose not to follow the community-based pattern established by the Ahtna.

In March 2009 the board established the current ANS of 600–1,000 caribou for the Nelchina caribou herd (NCH). When the Nelchina harvest quota is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus is comprised of resident-only hunts, including Tier I hunts (i.e., Copper Basin CSH hunt CC001 and Tier I registration hunts RC561 and RC562) and drawing permit hunts. The board has not established a harvest quota threshold that would allow nonresident hunting opportunity when the threshold is exceeded.

Since 2009, the NCH has increased in population size, as has participation in the Tier I hunt and the CSH hunt (Table 93-1). The department currently issues the maximum number of permits for the drawing hunt annually (5,000 drawing permits). Nonresident hunting opportunity has not been offered since 1981. The number of CSH caribou hunting harvest tickets/reports issued annually has increased from 477 in 2009 to 1,004 in 2017 (Table 93-2). Similarly, the number of Tier I registration permits issued annually also increased from 500 in 2009 to 8,444 in 2017. It should be noted that not every permit or harvest ticket/report equates to a hunter in the field or hunter success.

The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modeling suggested that the population size is comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

Prior to the establishment of the CSH in 2009, subsistence hunting of Nelchina caribou in Unit 13 was allocated through a registration hunt open only to local residents or a Tier II hunt (most years from 1990–2008). Other hunting opportunity was allocated through a drawing hunt (1983–1989).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season (RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018.

Table 93-1. Unit 13 state Nelchina caribou hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480–483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797
2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
2012	5,045	2,542	402	150	3,001	1,023	5,500	8,449	4,430
2013 ^c	6,880	1,573	689	114	5,000	609	2,500	12,567	2,645
2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241
2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f

^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15.

^d State hunts (fall season) were extended by Emergency Order from September 20 to September 30; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20 to September 30.

^f Harvest is ongoing.

Table 93-2. Nelchina caribou CSH participants in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Individuals	Number of Permits Reported Hunted
2009	1	27	477	-	288
2010 ^a	-	-	-	-	-
2011	6	29	322	636	176
2012	17	30	402	824	238
2013	28	40	689	1,424	308
2014	25	35	569	1,121	266
2015	26	39	659	1,359	330
2016	45	45	1,011	2,272	562
2017	51	47	1,085 ^b	2,507	274 ^c

^a The community hunt was not offered in regulatory year 2010.

^b Permits were not issued for every household because some were FTR.

^c The hunt is ongoing.

DEPARTMENT COMMENTS:

The department is **NEUTRAL** on the allocation of caribou and moose harvests in the Copper Basin Subsistence hunt area. At the special meeting in March 2017, the board passed Proposal 33, as amended, which retained the CSH for caribou and drawing hunts and modified the seasons for Tier I registration caribou hunts in Unit 13. The board's action on Proposal 33 does not come into effect until the 2018/2019 regulatory year. Due to its action on Proposal 33, the board took no action on 23 other proposals to eliminate, restrict, reduce or otherwise modify the CSH hunts

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 95 – 5 AAC 92.072. Community subsistence harvest hunt area and permit conditions, and 8.045. Hunting seasons and bag limits for moose. Eliminate the community subsistence harvest hunt for moose in Unit 13.

PROPOSED BY: Kenneth Manning

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the community subsistence harvest (CSH) for moose (CM300/CM301). *Note: The board held a special meeting in March 2017 where they addressed 44 proposals to modify or eliminate the CSH moose and caribou hunts. The intended effect of this proposal was addressed by the board at the March 2017 meeting.*

WHAT ARE THE CURRENT REGULATIONS?

- The Board of Game has made a positive C&T finding for moose in Unit 11 and found that 30–40 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 12, and found that 60–70 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose.
- Resident hunters with CSH harvest reports may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on one side (three or more brow tines in Unit 11).
- Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood.
- CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on one side (three or more brow tines in Unit 11).
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on one side from September 1–20.
- Resident hunters may apply for a drawing permit hunt for one antlerless moose (no take of calves or cows accompanied by a calf; DM325). Season dates for DM325 are October 1–31 and March 1–31; up to 200 permits may be issued. 10 permits were issued in 2017.

- Resident hunters may apply for a drawing permit for one bull (DM324), with season dates of September 1–20. Up to five permits may be issued, and all 5 permits were issued in 2017.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents with a drawing permit (DM335–DM339) have a bag limit of one bull with 50-inch antlers or antlers with 4 or more brow tines. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20.

In addition to regulations, the board has approved the following CSH hunt conditions under the department’s discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended for people to follow when the hunt was created, as specified in the board’s finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration moose permits, or hold general season moose harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Unit 11, 13, and that portion of Unit 12 south of the Little Tok River).
- Hunters must have a locking-tag in their possession to harvest an “any bull” moose, and are required to affix the locking-tag to the main-beam of one antler immediately upon harvest of a moose that does not conform to the Unit 13 general season antler restrictions. Hunters that do not have a locking tag in their possession must harvest only bulls that conform to the Unit 13 general season antler restrictions.
- Any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the head, heart, liver, kidneys, stomach, and hide, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The community hunt for moose in the Copper Basin Subsistence hunt area would not be available; the board may not be providing a reasonable opportunity for the communal pattern of use that was adopted into regulation. Moose hunting opportunities would only be provided for the individual pattern of use through harvest ticket and drawing opportunities. The proposal refers to an alternative Tier I moose hunt in Unit 13 which currently does not exist.

Hunting pressure would likely decrease on the mid-aged cohorts of moose protected by general season antler restrictions.

BACKGROUND: In 2006-170-BOG and 2011-184-BOG, the board recognized that there are two basic use patterns within a range of subsistence uses for moose and caribou in Unit 13: 1) a pattern for individuals, families, and other social groups [both within and outside the local area 2011-184-BOG]); and 2) “the community-based pattern established by the Ahtna” (2006-170-BOG). The board recognized that the community-based pattern has been “adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents.”

To address these patterns of use the BOG created the CSH moose and caribou hunts to provide a reasonable opportunity for the community-based pattern in addition to existing regulatory options that provide reasonable opportunities by individual hunters and families who chose not to follow the community-based pattern established by the Ahtna.

In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity with an earlier starting date for the CSH hunt. Board finding 2015-209-BOG recommends that the department establish individual quotas for each subarea of the Copper Basin community subsistence hunt for the moose that do not meet harvest ticket antler restrictions in Units 11 and 13, and attempt to achieve the quota for each subarea regardless of whether or not the total harvest exceeds the total allocation for the CSH program.

Since the CSH hunt was established, the number of individuals enrolled in the hunt has increased (Table 95-3). In 2009 there was one CSH moose group with 378 permitted participants, which increased to 45 groups with 2,066 permitted participants by 2013. Currently there are 83 groups with 3,136 permitted participants. The number of hunters that reported hunting increased from 293 in 2009 to 842 in 2013; since 2013 the number of hunters that reported hunting has fluctuated up and down between 607 in 2014 and 942 in 2016.

Since 2009, CSH hunters have harvested an average of 144 moose annually within the Copper Basin Subsistence hunt area (including Unit 11 and a portion of Unit 12), including an average of 85 bulls that do not meet general season antler restrictions (Table 95-3). General season harvest hunters in Unit 13 harvested an average of 660 moose annually during the same period.

Since 2016, five “any bull” draw permits have been issued annually in Unit 13 (DM324). Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

Bull-to-cow ratios are close to management objectives in most subunits (Table 95-4). Moose harvest in Unit 13 has been increasing in recent years (Figure 95-1). Harvest does not appear to be having an adverse effect on bull:cow ratios anywhere other than in 13A, where the bull:cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 20 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull:cow ratios compared to other subunits.

Table 95-3. Participation and harvest in the CSH moose hunts in Units 11, 13, and a portion of 12 in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Permit Holders	Number of Hunters Reported Hunting	Total Number of Moose Harvested ^a
2009	1	19	246	378	293	100 (68 any bulls)
2010 ^b	-	-	-	-	-	-
2011	9	32	407	753	312	86 (59 any bulls) ^c
2012	19	30	459	961	358	98 (73 any bulls) ^c
2013	45	39	955	2,066	842	156 (81 any bull) ^c
2014	43	35	893	1,771	607	120 (77 any bull) ^c
2015	43	46	1,039	1,984	621	171 (92 any bull) ^c
2016	73	47	1,527	3,023	942	201 (114 any bull) ^c
2017	83	51	1,680	3,136	773	184 (99 any bull) ^c

^a Additional “any-bulls” are harvested in the area under federal permits.

^b The community hunt was not offered in regulatory year 2010.

^c Emergency orders were issued to prevent any-bull harvest from exceeding the quotas for some subunits.

Table 95-4. Unit 13 moose population objectives and 2016 population estimates

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030
Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
2016 estimate	20	34	34	72	35

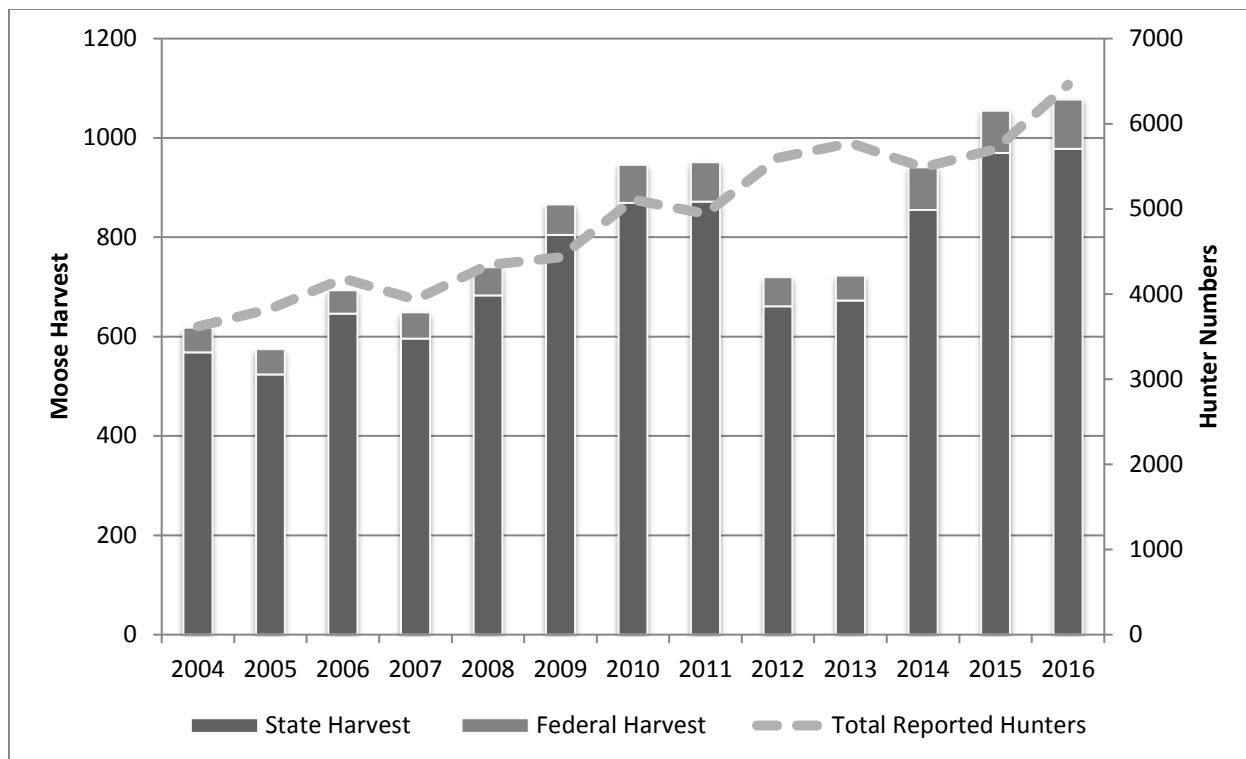


Figure 95-1. Total moose harvest and hunter participation in Unit 13, RY2004–2016.

DEPARTMENT COMMENTS:

The department is neutral on the allocation of moose harvests in the Copper Basin Subsistence hunt area. At a special meeting in March 2017, the board passed Proposal 20, as amended, which retained the CSH for moose and allocated 100 moose that do not meet antler restrictions to CSH participants by applying Tier II scoring criteria. The board's action on Proposal 20 does not come into effect until the 2018/2019 regulatory year. Due to its action on Proposal 20, the board took no action on 14 other proposals to eliminate, restrict, reduce or otherwise modify the CSH hunts for moose in Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 96 – 5 AAC 85.045. Hunting seasons and bag limits for moose, and 92.072.

Community subsistence harvest hunt area and permit conditions. Eliminate the community subsistence harvest hunt for moose in the Copper Basin area and establish a registration moose hunt for Unit 13.

PROPOSED BY: Rebecca Schwanke

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the community subsistence hunt (CSH) for moose (CM300; CM301) and establish a resident registration moose hunt in Unit 13 from August 1 to August 31 with a bag limit of one bull per household with antlers less than 50-inches wide and at least two brow tines on both sides. If a household registers for this moose hunt, no member of the household may hunt moose outside of Unit 13 during the regulatory year. Households would register during the November/December hunt application period available the year prior to the season in which they wish to hunt. A quota would be set for this hunt. This season would open five days earlier than the current CM300 season in Unit 13 but would offer no alternative season for CM300 in Units 11 and 12. There would be no replacement for the winter hunt CM301.

WHAT ARE THE CURRENT REGULATIONS? The Board of Game has made a positive C&T finding for moose in Unit 11 and found that 30–40 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 12, and found that 60–70 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose.

- Resident hunters with CSH harvest permits hunting within the Copper Basin Community Hunt area may harvest one bull from August 20–September 20 (CM300) in Unit 13, one bull from August 10–September 20 in Unit 11, or one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from August 24–28 or September 8–17 within Unit 12. The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season) for Units 11 and 13. Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
 - Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood.
 - CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
 - CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
 - The group coordinator must submit an annual Coordinator Community Harvest Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- Resident hunters may apply for a drawing permit hunt for one antlerless moose (no take of calves or cows accompanied by a calf; DM325). Season dates for DM325 are October 1–31 and March 1–31; up to 200 permits may be issued. Ten permits were issued in 2017.

- Resident hunters may apply for a drawing permit for one bull (DM324), with season dates of September 1–20. Up to five permits may be issued, and all 5 permits were issued in 2017.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents with a drawing permit (DM335–DM339) have a bag limit of one bull with 50-inch antlers or antlers with 4 or more brow tines. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20.

In addition to regulations, the board has approved the following CSH hunt conditions under the department’s discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended for people to follow when the hunt was created, specified in the board’s finding 2006-170-BOG. No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration moose permits, or hold general season moose harvest tickets.

- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Unit 11, 13, and that portion of Unit 12 south of the Little Tok River).
- Hunters must have a locking-tag in their possession to harvest an “any bull” moose, and are required to affix the locking-tag to the main-beam of one antler immediately upon harvest of a moose that does not conform to the Unit 13 general season antler restrictions. Hunters that do not have a locking tag in their possession must harvest only bulls that conform to the Unit 13 general season antler restrictions.
- Any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the head, heart, liver, kidneys, stomach, and hide, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The community hunt for moose in the Copper Basin Subsistence hunt area would not be available; the board may not be providing a reasonable opportunity for the communal pattern of use that was adopted into regulation. Moose hunting opportunities would only be provided for the individual pattern of use through harvest ticket and drawing opportunities, as well as a household pattern of use through the new registration opportunity. The only opportunity for resident hunters to harvest any antlered moose in Unit 13 would be provided by DM324 only.

The overall moose harvests in Units 11, 12, and 13 are not expected to be affected if the new registration hunt is managed on a quota basis, as the CSH hunt is now. There is likely to be very high interest in the

registration hunt proposed, which may result in the hunt closing very quickly in most subunits by Emergency Order.

BACKGROUND: In 2006-170-BOG and 2011-184-BOG, the board recognized that there are two basic use patterns within a range of subsistence uses for moose and caribou in Unit 13: 1) a pattern for individuals, families, and other social groups [both within and outside the local area 2011-184-BOG]; and 2) “the community-based pattern established by the Ahtna” (2006-170-BOG). The board recognized that the community-based pattern has been “adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents.”

To address these patterns of use the BOG created the CSH moose and caribou hunts to provide a reasonable opportunity for the community-based pattern in addition to existing regulatory options that provide reasonable opportunities by individual hunters and families who chose not to follow the community-based pattern established by the Ahtna.

In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity with an earlier starting date for the CSH hunt. Board finding 2015-209-BOG recommends that the department establish individual quotas for each subarea of the Copper Basin community subsistence hunt for the moose that do not meet harvest ticket antler restrictions in Units 11 and 13, and attempt to achieve the quota for each subarea regardless of whether or not the total harvest exceeds the total allocation for the CSH program.

Since the CSH hunt was established, the number of individuals enrolled in the hunt has increased (Table 96-3). In 2009 there was one CSH moose group with 378 permitted participants, which increased to 45 groups with 2,066 permitted participants by 2013. Currently there are 83 groups with 3,136 permitted participants. The number of hunters that reported hunting increased from 293 in 2009 to 842 in 2013; since 2013 the number of hunters that reported hunting has fluctuated up and down between 607 in 2014 and 942 in 2016.

Since 2009, CSH hunters have harvested an average of 144 moose annually within the Copper Basin Subsistence hunt area (including Unit 11 and a portion of Unit 12), including an average of 85 bulls that do not meet general season antler restrictions (Table 96-3). CSH hunters harvest an average of one moose each year in Unit 11, only one of which was harvested prior to September 1st. Only one moose has been harvested in Unit 12 by a CSH hunter since the inception of the hunt; that moose was harvested on August 10th despite the season in Unit 12 not opening until August 24th. Much of the Unit 13 CSH harvest occurs during the first ten days of the season, before general season hunters enter the field (Figure 103-1). General season harvest hunters in Unit 13 harvested an average of 660 moose annually since 2009

Since 2016, five “any bull” draw permits have been issued annually in Unit 13 (DM324). Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

Bull-to-cow ratios are close to management objectives in most subunits (Table 96-4). Moose harvest in Unit 13 has been increasing in recent years (Figure 96-2). Harvest does not appear to be having an adverse effect on bull:cow ratios anywhere other than in 13A, where the bull:cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 20 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull:cow ratios compared to other subunits.

Table 96-3. Participation and harvest in the CSH moose hunts in Units 11, 13, and a portion of 12 in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Permit Holders	Number of Hunters Reported Hunting	Total Number of Moose Harvested ^a
2009	1	19	246	378	293	100 (68 any bulls)
2010 ^b	-	-	-	-	-	-
2011	9	32	407	753	312	86 (59 any bulls) ^c
2012	19	30	459	961	358	98 (73 any bulls) ^c
2013	45	39	955	2,066	842	156 (81 any bull) ^c
2014	43	35	893	1,771	607	120 (77 any bull) ^c
2015	43	46	1,039	1,984	621	171 (92 any bull) ^c
2016	73	47	1,527	3,023	942	201 (114 any bull) ^c
2017	83	51	1,680	3,136	773	184 (99 any bull) ^c

^a Additional “any-bulls” are harvested in the area under federal permits.

^b The community hunt was not offered in regulatory year 2010.

^c Emergency orders were issued to prevent any-bull harvest from exceeding the quotas for some subunits.

Table 96-4. Unit 13 moose population objectives and 2016 estimates

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030
Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
Bull:cow estimate (average of most recent three years)	24	36	34	72	35

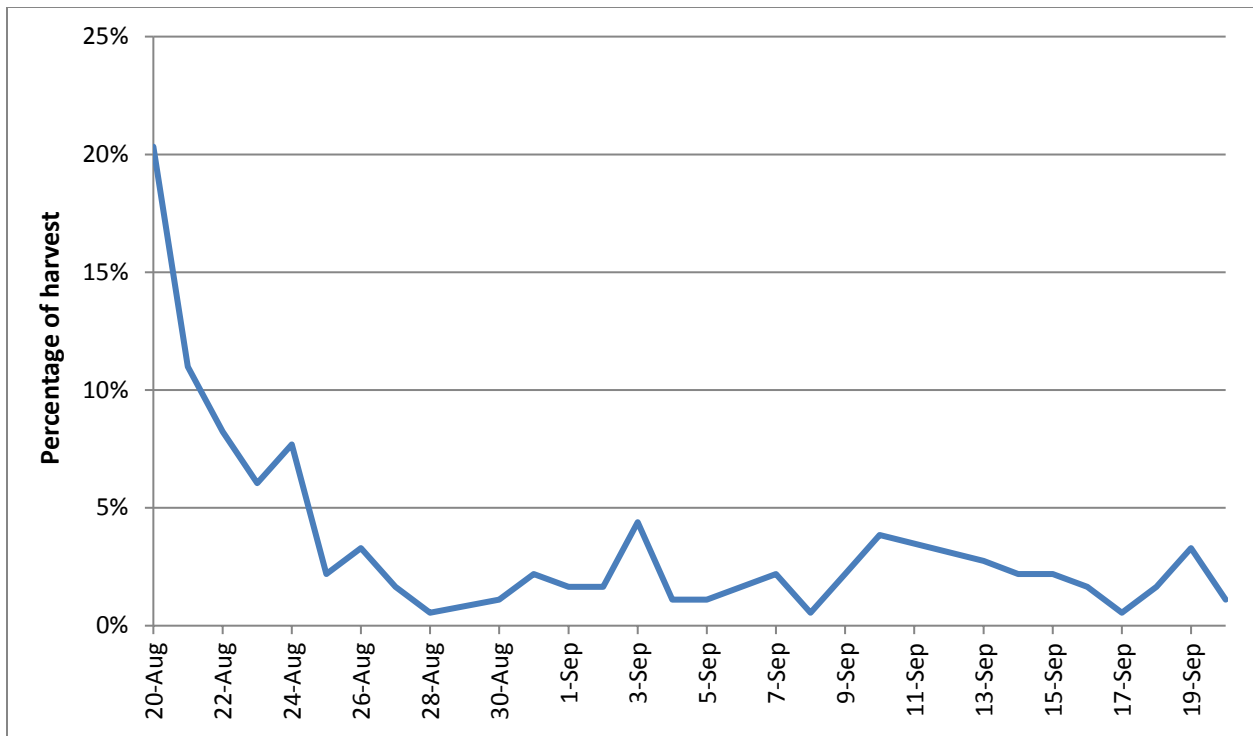


Figure 96-1. Chronology of moose harvest in the Unit 13 CSH hunt, RY2017.

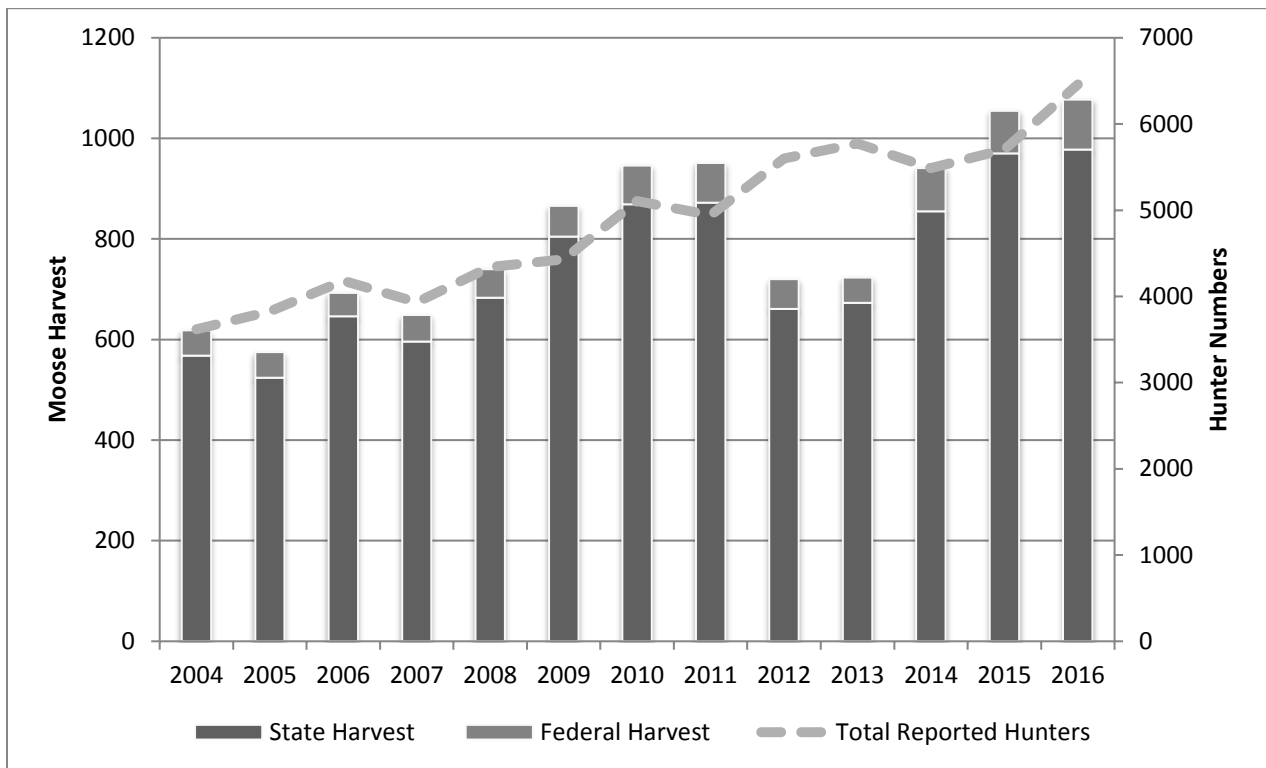


Figure 96-2. Total moose harvest and hunter participation in Unit 13, RY2004-2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose harvest in the Copper Basin Subsistence Hunt area. If the CSH moose hunt is eliminated and a new registration hunt is established, the board should consider whether reasonable opportunity for success in harvesting a moose under the communal pattern of use still exists, as well as overall reasonable opportunity for subsistence uses of moose in Units 11, 12, and 13. The overall moose harvests in Units 11, 12, and 13 are not expected to be affected if the new registration hunt is managed on a quota basis, as the CSH hunt is now. There is likely to be very high interest in the registration hunt proposed, which may result in the hunt closing very quickly in most subunits by Emergency Order.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 97 – 5 AAC 92.072. Community subsistence harvest hunt area and permit conditions. Remove the requirement for applicants to have specific customary and traditional use patterns for participating in the community subsistence harvest hunts in Unit 13.

PROPOSED BY: Kenneth Manning.

WHAT WOULD THE PROPOSAL DO? There is no requirement that applicants for the Copper Basin Community Subsistence Harvest Hunts in Unit 13 have specific customary and traditional use patterns, or that they practice or convert to specific customs and traditions. If broadly applied, however, this proposal would change the way the board considers regulatory proposals establishing community harvest hunt areas by eliminating the requirement that the board consider customs of community-based harvest and sharing (5 AAC 92.072(b)(3)), and other hunt practices demonstrating the customary and traditional pattern when issuing community subsistence hunt permits. The proposal would also eliminate the board’s intent that, in issuing permits, community subsistence hunters hunting moose and caribou in Unit 13 agree to make efforts to establish and observe the customary and traditional patterns of use defined in board finding #206-170-BOG (5 AAC 92.072.(b)(4)).

WHAT ARE THE CURRENT REGULATIONS? Current regulations (5 AAC 92.072(b)) require that the board consider various types of information when considering proposals to establish a community-based subsistence harvest hunt. This information includes a geographic description of the hunt area; the sustainable harvest and current subsistence regulations and findings for the big game population in question; a custom of community-based harvest and sharing of the wildlife resources harvested in the hunt area by any group; and other characteristics of harvest practices in the hunt area, including characteristics of the customary and traditional pattern of use found under 5 AAC 99.010(b).

Current regulation 5 AAC 99.010(b) states that the board, when applying the state subsistence law, shall identify fish and game stocks or portions of stocks customarily and traditionally used

for subsistence. The board shall define customary and traditional uses by considering the following eight criteria:

1. A long-term consistent pattern of use in effect over generations;
2. A pattern of taking or using resources during specific seasons;
3. A pattern of taking or use that utilized efficiency and economy of effort;
4. A pattern employed in a particular area;
5. A means of handling, preparing, preserving and storing harvest that has been used traditionally over several generations;
6. A transmission of knowledge, skills, values and lore over generations;
7. A practice of sharing and distribution of harvest; and
8. A pattern that includes taking and use of a wide variety of resources that together contribute to the subsistence way of life.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? There would be no effect on the Unit 13 community subsistence hunts because there is no requirement that applicants have already established the pattern of use described in the board finding. However, if broadly applied, the proposal would effectively sever the CSH permit and reporting system from the board finding #2006-170-BOG which describes the customary and traditional pattern of use of moose and caribou in Unit 13 demonstrated by the Ahtna Athabascans of the Copper River Basin and adopted by other Alaska residents. The proposal would eliminate the need for the board to gather information from CSH moose and caribou hunters in Unit 13 on participation and observance of the customary and traditional use pattern described in board finding #2006-170-BOG and summarized in regulation at 5 AAC 92.072(c)(3).

The proposal would also require modifications to current regulations requiring the board to consider community-based harvest and sharing practices (5 AAC 92.072(b)(3), as well as other characteristics of the customary and traditional pattern of use (5 AAC 92.072(b)(4), when considering proposals to establish a community subsistence harvest hunt.

BACKGROUND: In finding 2011-184-BOG the board recognized two distinct customary and traditional use patterns for Unit 13 moose and caribou; the first is a pattern for individuals, families and other social groups (both within and outside the local area) and the second is the community-based pattern established by the Ahtna (described earlier in Finding 2006-170-BOG). The board recognized that the community-based pattern has been adopted and modified by other local residents of the Copper River Basin area who are not Ahtna, as well as other Alaskan residents. The CSH was created to provide reasonable opportunity for Alaskans engaged in subsistence using the community-based pattern.

The CSH moose and caribou hunts were inaugurated in 2009 with one group for each hunt and a combined total of 378 participants. By 2014 there were a total of 68 different groups and 1,462

participants. In 2015, the board requested the department develop a questionnaire to collect information and help answer questions as to whether or not the CSH groups were observing or attempting to establish the pattern of use as required by the board.

For RY 2016/2017 a total of 72 moose groups and 45 caribou groups complied with the reporting requirement and returned completed questionnaires to the department. The department analyzed the information submitted on the reports and determined that 75% of moose groups and 80% of caribou groups were observing or attempting to observe five or more of the eight elements described in regulation. The analysis also determined that 51% of moose groups and 56% of caribou groups were observing or attempting to observe seven or eight total elements.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the proposal, but requests clarification from the board on how to provide opportunity for community-based subsistence hunts statewide, and for the Copper Basin Community hunts because, by their definition and by rulings of the Alaska Supreme Court, these hunts are intended to provide an opportunity to participate in a hunt in an area with a custom of community-based harvest and sharing of wildlife resources.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in these hunts, nor additional costs to the department

PROPOSAL 98 – 5 AAC 92.072. Community subsistence harvest hunt area and permit conditions. Modify the community subsistence harvest (CSH) permit conditions.

PROPOSED BY: Ahtna Tene Nené

WHAT WOULD THE PROPOSAL DO? This proposal has the following requests:

1. Delete references to “group” throughout the regulation; and
2. Delete references to “resident of community” throughout the regulation; and
3. Modify references to a CSH administrator to specify that the person is a community administrator; and
4. Require the department to determine if an applicant for the community hunt area described in 5 AAC 92.074(d) conforms with the definition of community. The regulation at 5 AAC 92.074(d) describes the area as the Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Kluti Kaah Community Harvest Area for moose and caribou; and
5. Delete a specific reference to meat sharing in that portion of 5 AAC 92.072 that describes how community members must make efforts to ensure that the customary and traditional use pattern is followed; and
6. Allow the department to waive an annual report requirement for a community that has demonstrated, for a five-year period, in their annual reports that it has a high degree of

participation in the customary and traditional community use pattern described in the board findings for the area; and

7. If a community fails to demonstrate that it is observing the customary and traditional use pattern the board described for that area, based on criteria and a scoring system developed by the department, allow the department to disprove an application for a CSH for two years for all members of the community; and

8. If a community has been denied a CSH because it failed to submit any report, or a report that demonstrates it observes the customary and traditional use pattern, allow an individual to appeal this decision within 60 days, and allow the department to accept a report that satisfies the department's reporting requirements; and

9. Authorize community administrators to require that members observe the customary and traditional use pattern described by the board; and

10. Amend the definition of community as individuals who participate in a consistent pattern of noncommercial taking, use, and reliance on a wide diversity of subsistence resources in an identified area that provides substantial economic, cultural or social, and nutritional elements of the subsistence way of life of the community and its members.

WHAT ARE THE CURRENT REGULATIONS? Use of the terms “community” and “group” in 5 AAC 92.072 mirrors the language in AS 16.05.330(c) that allows the board to adopt regulations for subsistence permits for communities and groups. A CSH administrator is referred to as a “community or group representative” throughout 5 AAC 92.072. Meat sharing is an example of a customary and traditional use pattern. Annual reporting by a community or group representative is required, and the regulation includes an appeals process for failure to report. A “community” or “group” is defined as “a group of people linked by a common interest in, and participation in uses of, an area and the wildlife populations in that area, that is consistent with the customary and traditional use pattern of that wildlife population and area as defined by the board.”

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Several changes would be made to the Copper Basin community subsistence hunts for moose and caribou. The department would be required to determine that the applicant meets the definition of community before issuing the community permit. The department would also be required to deny an applicant a permit if the applicant did not demonstrate in the previous year's report that the community is observing the customary and traditional use pattern described in board findings. The department would be required to establish a scoring system for community reports and a minimum score necessary to determine the applicant's eligibility. The department could waive the annual reporting requirement for any applicant that had demonstrated participation in the customary and traditional pattern in its reports over the previous five years.

BACKGROUND: The board held a special meeting in Glennallen on March 18–21, 2017, to address Copper Basin area moose and caribou hunting. The board retained the community hunts

for moose and caribou in the Copper Basin area. The board adopted an amended version of Proposal 20 that distributed the 100 moose that do not meet antler restrictions by Tier II criteria, with up to 350 permits issued. The season was changed to August 20–September 20. For the community caribou hunt, the board increased the bag limit to up to two caribou per household and increased the cap to 400 caribou. These regulatory changes come into effect in the 2018/19 regulatory year.

The board had this same proposal at the November Statewide Board meeting in Anchorage, Proposal 56, and deferred it to the Southcentral Regional meeting in Dillingham.

DEPARTMENT COMMENTS: The department is neutral on eligibility requirements for the Copper Basin community subsistence hunts.

COST ANALYSIS: Approval of this proposal may result in increased costs to private parties, as well as to the department.

PROPOSAL 99 – 5 AAC 92.050(a)(4)(I). Required permit hunt conditions and procedures. Remove the requirement that Unit 13 Tier I caribou hunters, community subsistence harvest (CSH) moose and caribou hunters, and all members of their households, shall hunt moose only in Unit 13.

PROPOSED BY: Kenneth Manning

WHAT WOULD THE PROPOSAL DO? Allow Tier I caribou hunters and CSH moose and caribou hunters to hunt moose outside of Unit 13.

WHAT ARE THE CURRENT REGULATIONS?

Caribou

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
- CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.

- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- One drawing permit hunt for caribou in Unit 13 (DC485) is available for resident hunters. Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.
- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.
- Up to 400 caribou can be taken by all CSH caribou groups combined.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

Tier I Nelchina caribou hunt participants (recipients of the permit and all household members) must abide by the following hunt conditions:

- No member of the household will be eligible to apply for or receive any other caribou permits.
- No member of the household may hunt caribou outside of Unit 13.
- No member of the household will be eligible to apply for or receive any moose permits outside of Unit 13.
- No member of the household may hunt moose outside of Unit 13.
- Any member of the household may harvest the caribou.
- Prior to Oct. 1, meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.
- The one caribou bag limit may be changed by Emergency Order to one bull or one cow, or the hunt may be closed by Emergency Order.
- No member of the household may proxy hunt for caribou or moose outside of Unit 13.
- Hunters can only proxy hunt for one Unit 13 caribou per regulatory year.
- Proxy hunters for Tier I Nelchina caribou must abide by the hunt conditions of the permit and cannot hunt moose or caribou outside of Unit 13 for the regulatory year.
- CSH hunters are not eligible to proxy hunt for Tier I Nelchina caribou permits.

In addition to regulations, the board has approved the following CSH caribou hunt conditions under the department's discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended when the hunt was created, and that is spelled out in the board's finding at 2006-170-BOG, namely:

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration caribou hunts, or hold general season caribou harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Unit 11, 13, and that portion of Unit 12 south of the Little Tok River).
- After the CSH hunt has ended, if the household was unsuccessful in filling the CSH bag limit during the CSH hunt, household members may hunt in areas outside the CSH hunt area with general caribou harvest tickets or other state caribou permits where the bag limit is greater than one caribou per household.
- No member of the household may hunt moose outside of the CSH hunt area.
- Any member of the household may harvest the caribou, and any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the heart, liver, kidneys, and fat, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Prior to October 1, meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.
- The one caribou bag limit may be changed by Emergency Order to one bull or one cow, or the hunt may be closed by Emergency Order.

CHS Moose

- Resident hunters with CSH harvest reports may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
- Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood. CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-

year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.

- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the FTR list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.

In addition to regulations, the board has approved the following CSH hunt conditions under the department's discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended for people to follow when the hunt was created, specified in the board's finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration moose permits, or hold general season moose harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Unit 11, 13, and that portion of Unit 12 south of the Little Tok River).
- Hunters must have a locking-tag in their possession to harvest an "any bull" moose, and are required to affix the locking-tag to the main-beam of one antler immediately upon harvest of a moose that does not conform to the Unit 13 general season antler restrictions. Hunters that do not have a locking tag in their possession must harvest only bulls that conform to the Unit 13 general season antler restrictions.
- Any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the head, heart, liver, kidneys, stomach, and hide, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Every resident who applied for the Tier I caribou hunt would receive one permit per household and would be allowed to hunt moose anywhere in the state; there is no cap on the number of Tier I caribou registration permits issued. Every group that successfully applied for the CSH caribou hunt would receive one permit per household and would be allowed to hunt moose anywhere in the state; there is no cap on the number of CSH caribou permits issued, although there is an annual harvest cap of 400 total caribou for the CSH hunt.

Removing the moose hunting restriction from the Tier I permit will result in the Tier I caribou permits (RC561 and RC562) essentially becoming an unlimited registration permit hunt; all residents who desire the opportunity to hunt Nelchina caribou will apply for, and receive, a household Tier I caribou permit. With the high demand for Nelchina permits, 20,000 permits or

more could conceivably be issued annually under this system. Even though the Nelchina herd is currently above management objectives, the current situation will not continue indefinitely, whereas permit demand is expected to remain high. Excessive permit numbers may result in early season closures by emergency order, increased crowding in the field, and increased complaints from the public regarding hunt quality and opportunity (the harvest will remain sustainable because the hunts will be closed by EO when the quota is reached). Removing the restriction is likely to have the opposite effect on Unit 13 hunter numbers as what is intended by the proposal.

The draw hunt, which now provides up to 5,000 hunters annually an opportunity to hunt Nelchina caribou in Unit 13 without the restrictions on hunting big game throughout the rest of the state, would no longer be necessary. Without a cap on Tier I permits, hunting seasons will likely be closed early by emergency order in years when the herd is within population objective and the harvest quota is reached quickly due to the popularity of the hunt and the guaranteed permit with no restrictions on big game hunting outside of the unit. Prior to the requirement for Tier I hunters to hunt moose in Unit 13, the years with the highest reported numbers of moose hunters were the years with the highest reported numbers of caribou hunters. This trend is expected to continue if the requirement is removed. As caribou hunter numbers increase, opportunistic moose hunting pressure may increase during years when the caribou season overlaps with the moose season.

BACKGROUND: The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modelling suggested that the population size was comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

When the harvest quota for Nelchina caribou is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus hunt structure is composed of resident-only hunts, which includes Tier I hunts (Copper Basin CSH hunt, CC001, and Tier I registration hunt, RC561 and RC562) and resident-only drawing permit hunts. Since the implementation of the Tier I caribou permit in 2009, Tier I applicants and permit recipients have steadily increased (Table 99-1). The current regulation to limit Unit 13 Tier I moose and caribou hunters to hunt moose only in Unit 13 was implemented in response to the customary and traditional use pattern of focusing subsistence effort only in the Copper Basin area, as well as a method of limiting the otherwise limitless number of permits to only those users that choose to rely on hunting moose and caribou in Unit 13 (as opposed to other areas of the state) for subsistence purposes.

The relative ease of access to the Nelchina caribou herd from the road system in the fall season and proximity to Alaska’s largest human population centers makes it a popular herd among hunters. For RY2016 there were 22,269 applications submitted for all Nelchina caribou permit opportunities. For 2017 there were 9,448 successful applications for Tier I caribou household

permits (RC566 and CC001), and 30,655 applications were submitted for draw permits (up to 6 applications could be submitted per person).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season (RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018.

Prior to the implementation of the Tier I requirements, the years with the highest numbers of caribou hunters in Unit 13 were the same years that the highest numbers of moose hunters were reported in the unit (Figure 99-1).

Table 99-1. Unit 13 state Nelchina caribou hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480-483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797
2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
2012	5,045	2,542	402	150	3,001	1,023	5,500	8,449	4,430
2013 ^c	6,880	1,573	689	114	5,000	609	2,500	12,567	2,645
2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241
2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f

^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15.

^d State hunts (fall season) were extended by Emergency Order from September 20 to September 30; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20 to September 30.

^f Harvest is ongoing.

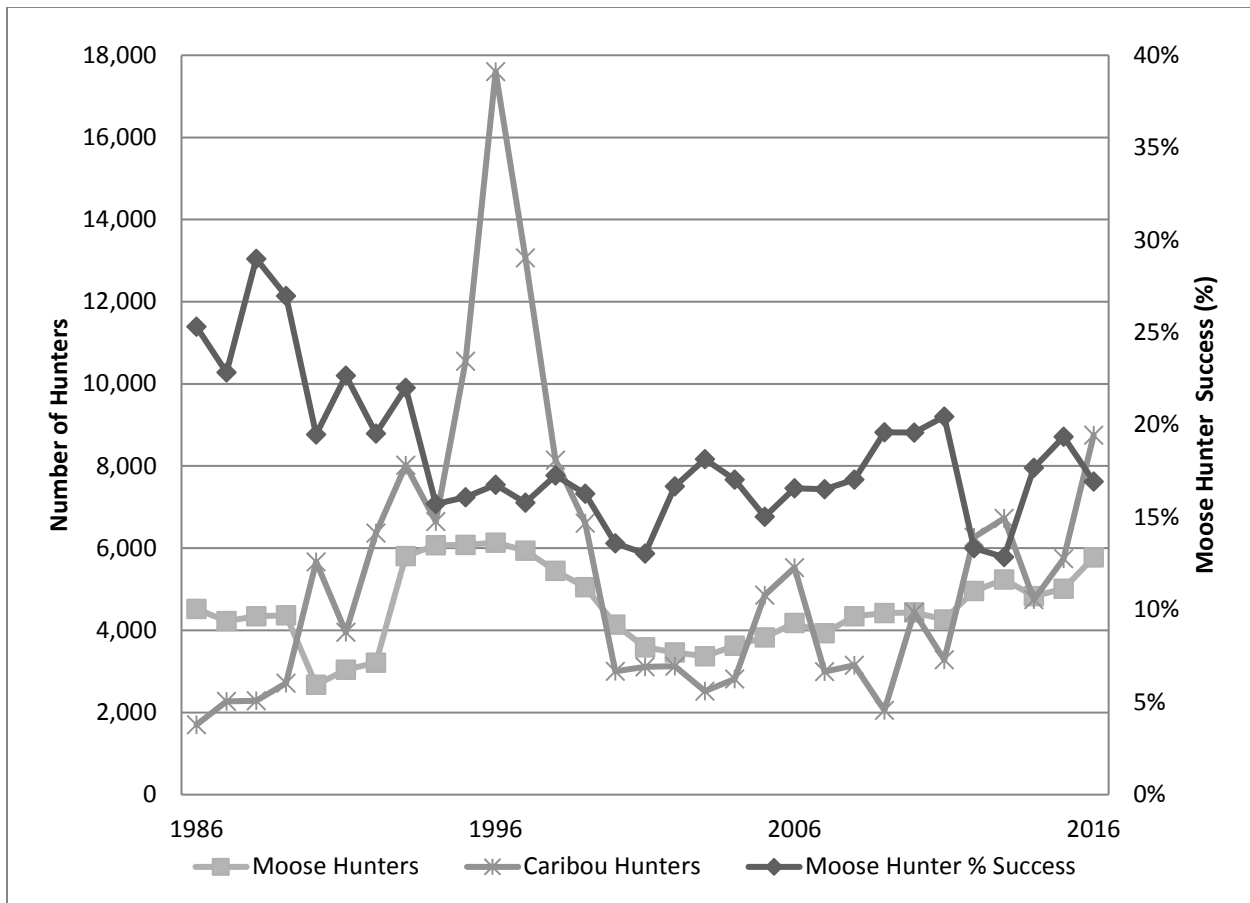


Figure 99-1. State moose and caribou hunters reported in Unit 13 versus moose hunter success rates in Unit 13, RY1986– 2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose and caribou hunting opportunity in Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 100 – 5 AAC 92.050(a)(4)(I). Required permit hunt conditions and procedures. Remove the requirement for Unit 13 Tier I caribou hunters to hunt moose only in Unit 13.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? Allow Tier I caribou hunters to hunt moose outside of Unit 13.

WHAT ARE THE CURRENT REGULATIONS?

Caribou

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
- CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- One drawing permit hunt for caribou in Unit 13 (DC485) is available for resident hunters. Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.
- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.
- Up to 400 caribou can be taken by all CSH caribou groups combined.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

Tier I Nelchina caribou hunt participants (recipients of the permit and all household members) must abide by the following hunt conditions:

- No member of the household will be eligible to apply for or receive any other caribou permits.
- No member of the household may hunt caribou outside of Unit 13.

- No member of the household will be eligible to apply for or receive any moose permits outside of Unit 13.
- No member of the household may hunt moose outside of Unit 13.
- Any member of the household may harvest the caribou.
- Prior to Oct. 1, meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.
- The one caribou bag limit may be changed by Emergency Order to one bull or one cow, or the hunt may be closed by Emergency Order.
- No member of the household may proxy hunt for caribou or moose outside of Unit 13.
- Hunters can only proxy hunt for one Unit 13 caribou per regulatory year.
- Proxy hunters for Tier I Nelchina caribou must abide by the hunt conditions of the RC566 permit and cannot hunt moose or caribou outside of Unit 13 for the regulatory year.
- CSH hunters are not eligible to proxy hunt for Tier I Nelchina caribou permits.

Unit 13 Moose Hunting Opportunities

- The Board of Game has made a positive C&T finding for moose in Unit 11 and found that 30–40 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 12, and found that 60–70 moose are reasonably necessary for subsistence in that unit. The board has also made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose.
- Resident hunters with CSH harvest reports may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
- Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood.
- CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.

- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- Resident hunters may apply for a drawing permit hunt for one antlerless moose (no take of calves or cows accompanied by a calf; DM325). Season dates for DM325 are October 1–31 and March 1–31; up to 200 permits may be issued. Ten permits were issued in 2017.
- Resident hunters may apply for a drawing permit for one bull (DM324), with season dates of September 1–20. Up to five permits may be issued, and all five permits were issued in 2017.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents with a drawing permit (DM335–DM339) have a bag limit of one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Every resident who applied for the Tier I caribou hunt would receive one permit per household and would be allowed to hunt moose anywhere in the state; there is no cap on the number of Tier I caribou registration permits issued. The draw hunt, which now provides up to 5,000 hunters annually an opportunity to hunt Nelchina caribou in Unit 13 without the restrictions on hunting big game throughout the rest of the state, would no longer be necessary. Without a cap on Tier I permits, hunting seasons will likely be closed early by emergency order in years when the herd is within population objective and the harvest quota is reached quickly due to the popularity of the hunt and the guaranteed permit with no restrictions on big game hunting outside of the unit.

Prior to the requirement for Tier I hunters to hunt moose in Unit 13, the years with the highest reported numbers of moose hunters were the years with the highest reported numbers of caribou hunters. This trend is expected to continue if the requirement is removed. As caribou hunter numbers increase, opportunistic moose hunting pressure may increase during years when the caribou season overlaps with the moose season.

Removing the moose hunting restriction from the Tier I permit will result in the Tier I caribou permits (RC561 and RC562) essentially becoming unlimited registration permit hunts; all residents who desire the opportunity to hunt Nelchina caribou will apply for, and receive, a household Tier I caribou permit. With the high demand for Nelchina permits, 20,000 permits or more could conceivably be issued annually under this system. Even though the Nelchina herd is currently above management objectives, the current situation will not continue indefinitely, whereas permit demand is expected to remain high. Excessive permit numbers may result in early season closures by emergency order, increased crowding in the field, and increased complaints from the public regarding hunt quality and opportunity (the harvest will remain sustainable because the hunts will be closed by EO when the quota is reached). Removing the restriction is likely to have the opposite effect on Unit 13 hunter numbers as what is intended by the proposal.

BACKGROUND: The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modelling suggested that the population size was comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

When the harvest quota for Nelchina caribou is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus hunt structure is composed of resident-only hunts, which includes Tier I hunts (Copper Basin CSH hunt, CC001, and Tier I registration hunt, RC561 and RC562) and resident-only drawing permit hunts. Since the implementation of the Tier I caribou permit in 2009, Tier I applicants and permit recipients have steadily increased (Table 100-1). The restriction in place to limit Unit 13 Tier I moose and caribou hunters to hunt moose only in Unit 13 was implemented to provide for the pattern of use that focuses on subsistence uses in the Copper Basin area in board findings as well as a method of limiting the otherwise limitless number of permits to only those users that choose to rely on hunting moose and caribou in Unit 13 (as opposed to other areas of the state) for subsistence purposes.

The relative ease of access to the Nelchina caribou herd from the road system in the fall season and proximity to Alaska’s largest human population centers makes it a popular herd among hunters. For RY2016 there were 22,269 applications submitted for all Nelchina caribou permit opportunities. For 2017 there were 9,448 successful applications for Tier I caribou household permits (RC566 and CC001), and 30,655 applications were submitted for draw permits (up to six applications could be submitted per person).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season (RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018.

Prior to the implementation of the Tier I requirements, the years with the highest numbers of caribou hunters in Unit 13 were the same years that the highest numbers of moose hunters were reported in the unit (Figure 100-1).

Table 100-1. Unit 13 state Nelchina caribou hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480-483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797
2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
2012	5,045	2,542	402	150	3,001	1,023	5,500	8,449	4,430
2013 ^c	6,880	1,573	689	114	5,000	609	2,500	12,567	2,645
2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241
2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f

^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15.

^d State hunts (fall season) were extended by Emergency Order from September 20 to September 30; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20 to September 30.

^f Harvest is ongoing.

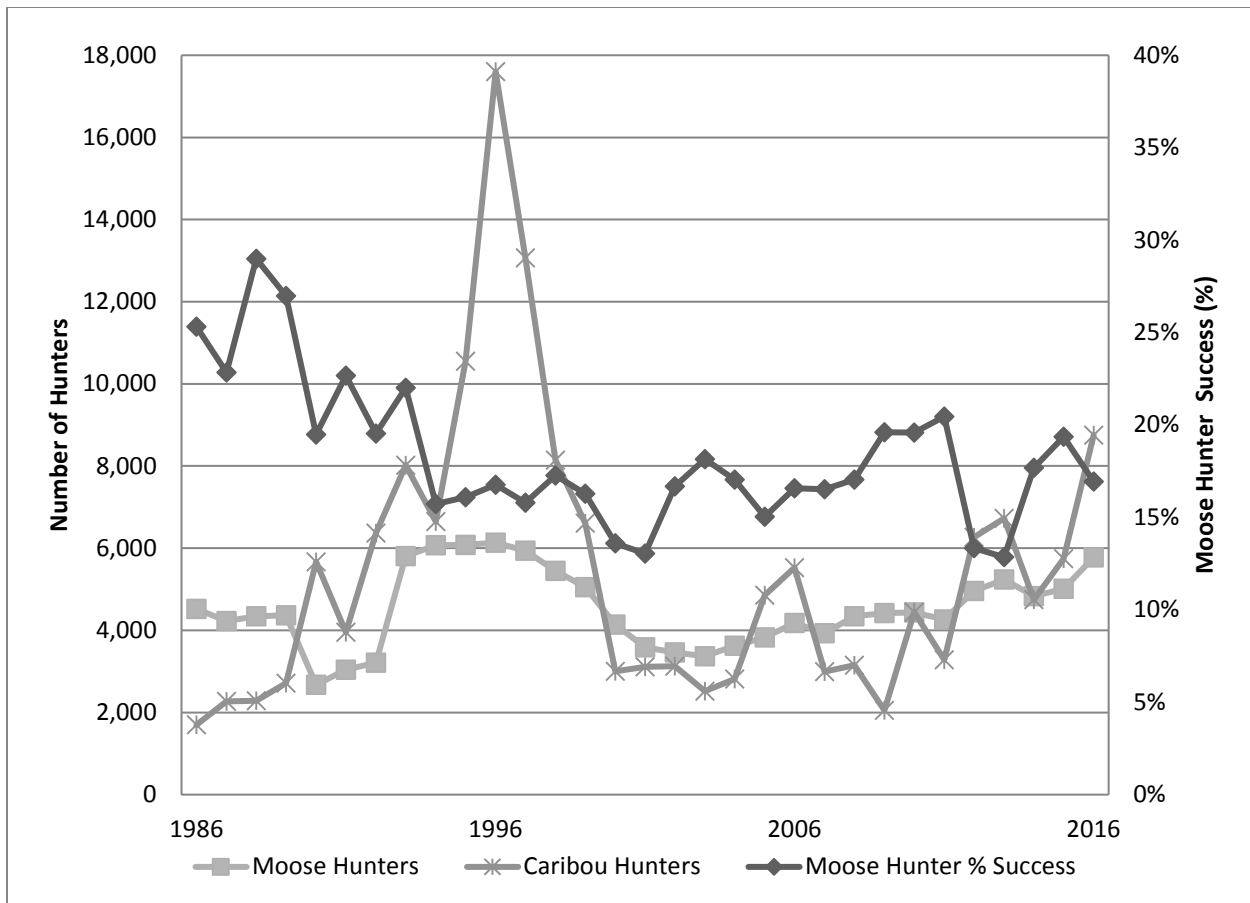


Figure 100-1. State moose and caribou hunters reported in Unit 13 versus moose hunter success rates in Unit 13, RY1986–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose and caribou hunting opportunity in Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 101 – 5 AAC 85.025. Hunting seasons and bag limits for caribou. Establish a youth hunting season for caribou in Unit 13.

PROPOSED BY: Jennifer Bondy

WHAT WOULD THE PROPOSAL DO? Establish a caribou hunt for resident youths who are 10 to 17 years old during the hunt period in Unit 13 with season dates of August 1–5.

WHAT ARE THE CURRENT REGULATIONS?

Caribou

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
- CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Coordinator Community Harvest Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
- One drawing permit hunt for caribou in Unit 13 (DC485) is available for resident hunters. Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.
- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.
- Up to 400 caribou can be taken by all CSH caribou groups combined.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

Youth Hunts

- “Youth hunt” means a hunt limited to a child aged 10 to 17 and an accompanying adult; if the child is a resident, the accompanying adult may be any licensed resident hunter 21 years of age or older; if the child is a nonresident, the accompanying adult must be a licensed resident hunter 21 years of age or older who is a parent, stepparent, or legal guardian of the child.
- Bag limit counts against the bag limit of BOTH the permittee and the accompanying adult.
- Basic Hunter Education is required.

- In some youth hunts, permittees and accompanying adults are required to wear hunter orange vests.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?

Resident youth hunters between the ages of 10–17 would have additional opportunity to harvest caribou prior to other hunting seasons opening in Unit 13. Each permittee would be accompanied in the field by a licensed resident adult at least 21 years old. Bag limit counts against the bag limit of both the permittee and the accompanying adult.

The board would have to determine what type of hunt to offer (general season harvest ticket, registration, or drawing) if this opportunity is created. The board will also need to determine how, if at all, it would impact youth hunters that are part of Tier I households or Community Subsistence Harvest groups.

While a youth caribou season with dates of August 1–5 will allow youth hunters five days of hunting opportunity with presumably less crowding, those dates in early August are likely to be notably warmer and bugger than later in the caribou season. These may not be optimal conditions for an enjoyable hunt if the intent is to foster an appreciation for hunting among the youth. While in the field, youth caribou hunters may be able to opportunistically harvest bears or hares, but other small game is closed during this period.

BACKGROUND: Currently, specific youth hunts in Unit 13 are only available for resident sheep hunters holding general season harvest tickets.

In March 2009 the board established the current ANS of 600–1,000 caribou for the Nelchina caribou herd (NCH). When the Nelchina harvest quota is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus is comprised of resident-only hunts, including Tier I hunts (i.e., Copper Basin CSH hunt CC001 and Tier I registration hunts RC561 and RC562) and drawing permit hunts. The board has not established a harvest quota threshold that would allow nonresident hunting opportunity when the threshold is exceeded.

Since 2009, the NCH has increased in population size, as has participation in the Tier I hunt and the CSH hunt (Table 101-1). The department currently issues the maximum number of permits for the drawing hunt annually (5,000 drawing permits). Nonresident hunting opportunity has not been offered since 1981. It should be noted that not every permit or harvest ticket/report equates to a hunter in the field or hunter success.

The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modeling suggested that the population size is comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

Prior to the establishment of the CSH in 2009, subsistence hunting of Nelchina caribou in Unit 13 was allocated through a registration hunt open only to local residents or a Tier II hunt (most years from 1990–2008). Other hunting opportunity was allocated through a drawing hunt (1983–1989).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season

(RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018. The CSH caribou hunt remains in effect with season dates of August 10–September 20 and October 21–March 31.

Table 101-1. Unit 13 state Nelchina caribou hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480-483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797
2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
2012	5,045	2,542	402	150	3,001	1,023	5,500	8,449	4,430
2013 ^c	6,880	1,573	689	114	5,000	609	2,500	12,567	2,645
2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241
2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f

^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15th.

^d State hunts (fall season) were extended by Emergency Order from September 20th to September 30th; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20th to September 30th.

^f Harvest is ongoing.

DEPARTMENT COMMENTS The department is **NEUTRAL** on the allocation of caribou hunting opportunity and has no biological conservation concerns.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 102 – 5 AAC 85.025. Hunting seasons and bag limits for caribou. Open a nonresident caribou hunting season in Unit 13 and allocate up to ten percent of drawing permits to nonresidents when the herd is within or above the population objective.

PROPOSED BY: Aaron Bloomquist

WHAT WOULD THE PROPOSAL DO? Establish a caribou drawing hunt for nonresident hunters. When the Nelchina caribou herd is within or above population objectives, up to 10 percent of Unit 13 caribou drawing permits (DC485; up to 5,000 total permits may be issued annually) will be allocated to nonresident hunters with season dates of August 20–September 20 and October 21–March 31. It is not clear how the 10 percent should be allocated or at what thresholds it should be reduced.

WHAT ARE THE CURRENT REGULATIONS?

- There is a positive C&T use finding for the Nelchina caribou herd in Unit 13 with an ANS of 600–1,000 caribou.
- Tier I registration permits are issued to all residents who successfully apply for the hunt. Applicants must choose between a season of August 10–August 31 and October 21–March 31 (RC561) or September 1–September 20* and October 21–March 31 (RC562) with a bag limit of one caribou per household. There is no cap on the number of Tier I caribou registration permits that may be issued annually.
- Tier I Community Subsistence Harvest permits and reports (CC001) are issued to all residents who successfully apply for the hunt. The season is August 10–September 20* and October 21–March 31 with a bag limit of one caribou per household. There is no cap on the number of Tier I CSH permits that may be issued annually.
 - CSH caribou hunt participants (recipients of CC001, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
 - The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.
 - Up to 400 caribou can be taken by all CSH caribou groups combined.
- Resident hunters may apply for a drawing permit hunt for caribou in Unit 13 (DC485). Up to 5,000 permits may be issued annually to resident hunters. The season is August 20–September 20* and October 21–March 31 with a bag limit of one caribou.
- There is currently no nonresident hunting season for Nelchina caribou in Unit 13.
- Federal subsistence regulations provide additional opportunities for residents of Units 11, 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations can obtain a permit to harvest two caribou in Units 13A and 13B or two bulls in Units 13C, 13D, and 13E—a total bag limit of two caribou per hunter. The federal seasons are August 1–September 30 and October 21–March 31 throughout Unit 13.

**Note: The fall Nelchina caribou hunting season was extended by Emergency Order until September 30 for all state hunts in 2016 and 2017; the bag limit for RC566 and CC001 for RY2016 was raised from one to two caribou by Emergency Regulation in March 2017.*

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Nonresident hunters would have the opportunity to harvest caribou in Unit 13 under the current DC485 draw hunt. Up to 500 permits would be reallocated from resident to nonresident hunters annually based on a $\leq 10\%$ allocation resulting in a reduction in resident caribou hunting opportunity. Nonresident hunters would not have the opportunity to hunt caribou in Unit 13 during years when the Nelchina herd is below management objectives.

BACKGROUND: In March 2009 the board established the current ANS of 600–1,000 caribou for the Nelchina caribou herd (NCH). When the Nelchina harvest quota is above 1,000 caribou, hunting opportunity is administered under a “Tier I Plus” hunt structure. The Tier I Plus is comprised of resident-only hunts, including Tier I hunts (i.e., Copper Basin CSH hunt CC001 and Tier I registration hunts RC561 and RC562) and drawing permit hunts. The board has not established a harvest quota threshold that would allow nonresident hunting opportunity when the threshold is exceeded.

Since 2009, the NCH has increased in population size, as has participation in the Tier I hunt and the CSH hunt (Table 102-1). The department currently issues the maximum number of permits for the drawing hunt annually (5,000 drawing permits). Because of the high demand by residents and the frequent occurrence of Tier II restrictions, nonresident hunting opportunity has not been offered since 1981. It should be noted that not every permit or harvest ticket/report equates to a hunter in the field or hunter success.

The management objective for the NCH is to maintain a population between 35,000 and 40,000 animals. A minimum count of the Nelchina herd in the summer of 2016 observed 49,950 animals. Composition surveys conducted during October 2016 observed ratios of 56 bulls:100 cows and 48 calves:100 cows. A population estimate was not established for 2017 but modeling suggested that the population size is comparable to the 2016 estimate. Composition surveys conducted during July 2017 observed ratios of 45 bulls:100 cows and 54 calves:100 cows.

Prior to the establishment of the CSH in 2009, subsistence hunting of Nelchina caribou in Unit 13 was allocated through a registration hunt open only to local residents or a Tier II hunt (most years from 1990–2008). Other hunting opportunity was allocated through a drawing hunt (1983–1989).

In March of 2017, the board split the Tier I Nelchina Hunt (RC566) into two separate seasons in an effort to decrease hunter crowding; hunters must now choose the August season or the September season (RC561 or RC562), and both permits include the winter season. These seasons will be implemented for RY2018. The CSH caribou hunt remains in effect with season dates of August 10–September 20 and October 21–March 31.

Table 102-1. Unit 13 Nelchina caribou state hunting permits issued annually and total harvest, regulatory years 2009 through 2017.

Year	RC566		CC001		DC480-483 or 485		Harvest Quota	Total State Permits	Reported Harvest ^a
	Permits	Harvest	Permits	Harvest	Permits	Harvest			
2009	500	277	477	127	-	-	1,000	979	797
2010 ^b	1,151	615	-	-	-	-	2,300	4,755	2,439
2011	3,148	1,626	322	87	1,127	319	2,400	4,598	2,515
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2014	5,595	2,268	569	144	1,000	299	3,000	7,164	2,993
2015	7,232	2,909	659	191	1,001	296	3,000	8,895	4,134
2016 ^d	8,470	3,482	1,006	370	5,000	1,898	-	14,476	6,241

2017 ^e	8,444	2,523 ^f	1,004	242 ^f	5,000	1,329 ^f	6,000	14,448	4,429 ^f
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^a Reported harvest includes caribou taken under state and federal hunts.

^b The CSH caribou hunt was not offered during regulatory year 2010, but 3,604 permits were issued for a winter hunt (TC566).

^c State hunts were closed by Emergency Order on October 15.

^d State hunts (fall season) were extended by Emergency Order from September 20 to September 30; bag limit for RC566 and CC001 was raised from one to two caribou by Emergency Regulation in March 2017.

^e State hunts (fall season) were extended by Emergency Order from September 20 to September 30.

^f Harvest is ongoing.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of caribou hunting opportunity and has no conservation concerns. If the proposal is adopted, the board should consider in what cases 10 percent of draw permits should be allocated to nonresidents and when it should be reduced.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 103 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Change the community subsistence harvest (CSH) hunt season dates for moose to align with the general season moose hunt in Unit 13.

PROPOSED BY: Anchorage Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? The proposal seeks to align the CSH moose hunt dates (August 20–September 30) with the existing general season dates in Unit 13 (September 1–30), but it is unclear if the proponent intends for these dates to be applied to the CSH hunt in Unit 11 and Unit 12 as well (general season dates in Units 11 and 12 are different from those in Unit 13; Unit 12 is not on the call for proposals for this meeting). *Note: The board held a special meeting in March 2017 where they addressed 44 proposals to modify or eliminate the CSH moose and caribou hunts. The intended effect of this proposal was addressed by the board at the March 2017 meeting.*

WHAT ARE THE CURRENT REGULATIONS? The Board of Game has made a positive C&T finding for moose in Units 11, 12 and 13 and determined that 30–40 moose are reasonably necessary for subsistence (ANS) in Unit 11, 60–70 moose in Unit 12 and 300–600 moose for Unit 13.

Unit 11 CSH and General Season Moose

- Resident hunters with CSH harvest reports may harvest one bull from August 10–September 20 (CM300). The board has established a CSH allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order

to one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side.

- Resident and nonresident hunters with a moose harvest ticket may harvest one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side from August 20–September 20.

Unit 12 CSH and General Season Moose within the Copper Basin Community Hunt area

- Resident hunters with CSH harvest reports may harvest one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from August 24–28 or September 8–17 within the portion of Unit 12 that includes all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Units 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.
- Resident hunters with a moose harvest ticket may harvest one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from August 24–28 or September 8–17 within the portion of Unit 12 that includes all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Units 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.
- Nonresident hunters with a moose harvest ticket may harvest one bull with 50-inch antlers or antlers with four or more brow tines on at least one side from September 8–17 within the portion of Unit 12 that includes all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Units 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.

Unit 13 CSH and General Season Moose

- Resident hunters with CSH harvest reports may harvest one bull from August 20–September 20 (CM300). The board has established a CSH allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side.
- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been

implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.

Additional CSH Moose Regulations

- Locking tags allowing the take of an “any bull” in Unit 11 or Unit 13 are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood.
- CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side (three or more brow tines in Unit 11).
- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report list and will not be eligible to participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.

In addition to regulations, the board has approved the following CSH hunt conditions under the department’s discretionary permit authority in order to ensure that participants are following, or attempting to follow, the customary and traditional use pattern that the board intended for people to follow when the hunt was created, specified in the board’s finding 2006-170-BOG.

- No member of the household will be eligible to hold any state drawing/Tier I/Tier II/or registration moose permits, or hold general season moose harvest tickets.
- No member of the household may apply for state or federal moose or caribou permit hunts outside of the Copper Basin Community Hunt area (Unit 11, 13, and that portion of Unit 12 south of the Little Tok River).
- Hunters must have a locking-tag in their possession to harvest an “any bull” moose, and are required to affix the locking-tag to the main-beam of one antler immediately upon harvest of a moose that does not conform to the Unit 13 general season antler restrictions. Hunters that do not have a locking tag in their possession must harvest only bulls that conform to the Unit 13 general season antler restrictions.
- Any member of a given CSH group may hunt on behalf of another member as a designated hunter.
- Hunters must salvage the head, heart, liver, kidneys, stomach, and hide, as well as all edible meat from the front quarters, hindquarters, ribs, neck, and backbone.
- Meat of the forequarters, hindquarters, and ribs must remain naturally attached to the bone until delivered to the place where it is processed for human consumption.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The CSH moose hunt dates would coincide with the Unit 13 general season moose hunt dates (September 1–30). The board would have to determine if this change would apply to the CSH hunt in both Units 11 and 13, or Unit 13 only (Unit 12 is not on call). This proposal would shorten the CSH moose hunt in Unit 13 by 10 days and would potentially shorten the CSH moose hunt in Unit 11 by 20 days, but the overall moose harvests and population in Unit 13 and in Unit 11 are not expected to be affected.

BACKGROUND: In 2006-170-BOG and 2011-184-BOG, the board recognized that there are two basic use patterns within a range of subsistence uses for moose and caribou in Unit 13: 1) a pattern for individuals, families, and other social groups [both within and outside the local area 2011-184-BOG]; and 2) “the community-based pattern established by the Ahtna” (2006-170-BOG). The board recognized that the community-based pattern has been “adopted and modified by other local settlers and, to a more limited degree, by other Alaska residents.”

To address these patterns of use the BOG created the CSH moose and caribou hunts to provide a reasonable opportunity for the community-based pattern in addition to existing regulatory options that provide reasonable opportunities by individual hunters and families who chose not to follow the community-based pattern established by the Ahtna. The Copper Basin Subsistence hunt area includes all of Unit 11, a portion of Unit 12, and all of Unit 13.

In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity with an earlier starting date for the CSH hunt. The CSH hunt in Unit 13 originally opened on August 10. Effective RY2016, the board shortened the CSH moose hunt in Unit 13 by 10 days, moving the opening day to the current date of August 20.

Board finding 2015-209-BOG recommends that the department establish individual quotas for each subarea of the Copper Basin community subsistence hunt for the moose that do not meet harvest ticket antler restrictions in Units 11 and 13, and attempt to achieve the quota for each subarea regardless of whether or not the total harvest exceeds the total allocation for the CSH program.

Since the CSH hunt was established, the number of individuals enrolled in the hunt has increased (Table 103-3). In 2009 there was one CSH moose group with 378 permitted participants, which increased to 45 groups with 2,066 permitted participants by 2013. Currently there are 83 groups with 3,136 permitted participants. The number of hunters that reported hunting increased from 293 in 2009 to 842 in 2013; since 2013 the number of hunters that reported hunting has fluctuated up and down between 607 in 2014 and 942 in 2016.

Since 2009, CSH hunters have harvested an average of 144 moose annually within the Copper Basin Subsistence hunt area (including Unit 11 and a portion of Unit 12), including an average of 85 bulls that do not meet general season antler restrictions (Table 103-3). CSH hunters harvest an average of one moose each year in Unit 11, only one of which was harvested prior to September

1. Only one moose has been harvested in Unit 12 by a CSH hunter since the inception of the hunt; that moose was harvested on August 10 despite the season in Unit 12 not opening until August 24. Much of the Unit 13 CSH harvest occurs during the first ten days of the season, before general season hunters enter the field (Figure 103-1). General season hunters in Unit 13 harvested an average of 660 moose annually since 2009.

Since 2016, five “any bull” draw permits have been issued annually in Unit 13 (DM324). Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

Bull-to-cow ratios are close to management objectives in most subunits (Table 103-4). Moose harvest in Unit 13 has been increasing in recent years (Figure 103-2). Harvest does not appear to be having an adverse effect on bull:cow ratios anywhere other than in 13A, where the bull:cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 20 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull:cow ratios compared to other subunits.

Table 103-3. Participation and harvest in the CSH moose hunts in Units 11, 13, and a portion of 12 in regulatory years 2009 through 2017.

Regulatory Year	Number of Groups	Number of Communities Represented	Number of Households	Number of Permit Holders	Number of Hunters Reported Hunting	Total Number of Moose Harvested ^a
2009	1	19	246	378	293	100 (68 any bulls)
2010 ^b	-	-	-	-	-	-
2011	9	32	407	753	312	86 (59 any bulls) ^c
2012	19	30	459	961	358	98 (73 any bulls) ^c
2013	45	39	955	2,066	842	156 (81 any bull) ^c
2014	43	35	893	1,771	607	120 (77 any bull) ^c
2015	43	46	1,039	1,984	621	171 (92 any bull) ^c
2016	73	47	1,527	3,023	942	201 (114 any bull) ^c
2017	83	51	1,680	3,136	773	184 (99 any bull) ^c

^a Additional “any-bulls” are harvested in the area under federal permits.

^b The community hunt was not offered in regulatory year 2010.

^c Emergency orders were issued to prevent any-bull harvest from exceeding the quotas for some subunits.

Table 103-4. Unit 13 moose population objectives and 2016 estimates

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030

Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
2016 estimate	20	34	34	72	35

Figure 103-1. Chronology of moose harvest in the Unit 13 CSH hunt, RY2017.

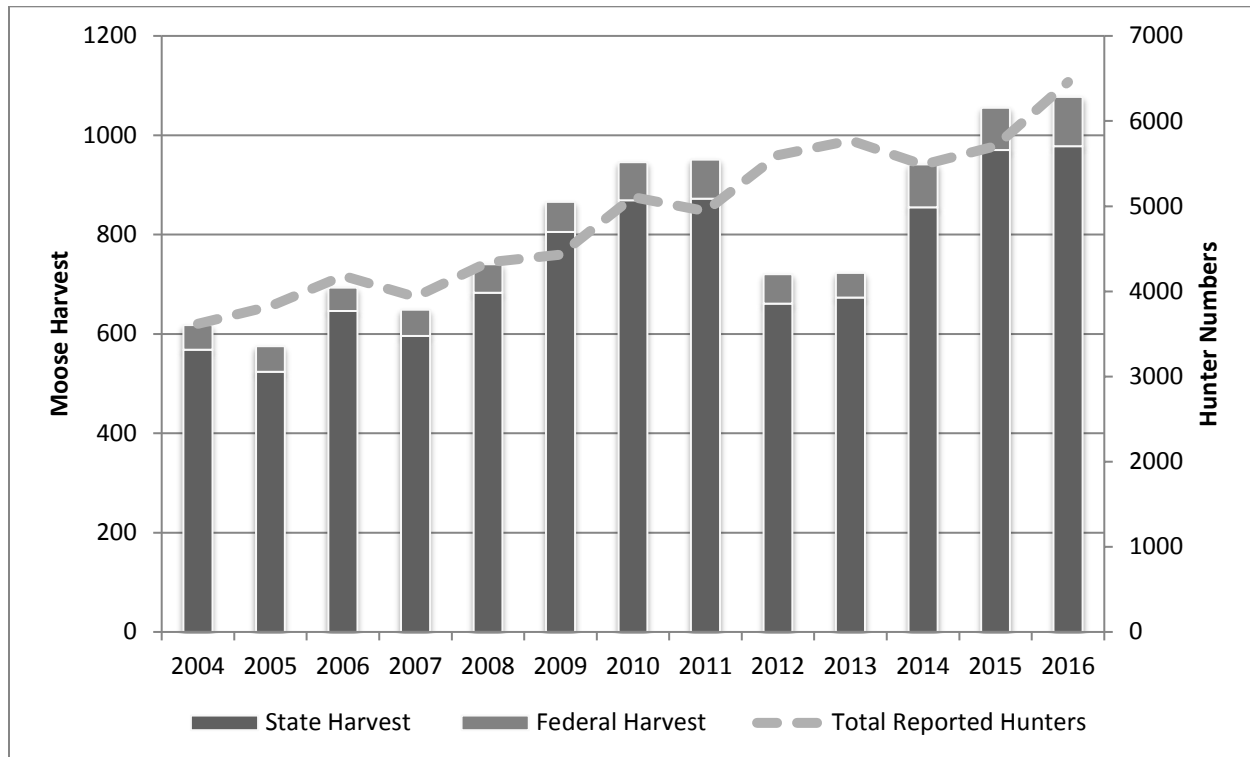


Figure 103-2. Total moose harvest and hunter participation in Unit 13, RY2004-2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose harvest in Units 11 and 13. At a special meeting in March 2017 the board passed Proposal 20, as amended, which retained the CSH for moose and allocated 100 moose that do not meet antler restrictions to CSH participants by applying Tier II scoring criteria. The board's action on Proposal 20 will not take effect until the 2018/2019 regulatory year and may affect harvest timing.

If the CSH moose hunt is shortened in Unit 11 or Unit 13, the board should consider whether reasonable opportunity for success in harvesting a moose for the communal pattern of use still exists, as well as overall reasonable opportunity for subsistence uses of moose in Units 11 and 13. The overall moose population and harvests in Unit 13 and in Unit 11 are not expected to be affected.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 104 – 5 AAC 85.045(11). Hunting seasons and bag limits for moose. Reauthorize the antlerless moose seasons in Unit 13.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the antlerless moose hunts in Unit 13.

WHAT ARE THE CURRENT REGULATIONS? The department is authorized to issue up to 200 drawing permits for antlerless moose hunts in Unit 13 for an October 1–31 and March 1–31 season. Hunters are prohibited from taking calves and cows accompanied by a calf.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal reauthorizes the antlerless moose hunts in Unit 13 and will allow the department to issue antlerless moose permits during the regulatory year 2018 season.

BACKGROUND: The Unit 13 antlerless hunt was established in March 2011, and the first Unit 13 antlerless hunt under this regulation took place in September 2012. Ten permits have been issued annually for a single hunt area in the western portion of Unit 13A. This hunt resulted in the harvest of four cow moose during the 2012 season, two during the 2013 season, seven during the 2014 season, seven during the 2015 season, and five during the 2016 season.

During the 2013 Board of Game meeting in Wasilla, the board adopted a proposal that changed the hunt from September 1–20 to October 1–31 and March 1–31. These new season dates were implemented in the fall of 2014, after which harvest success appears to have increased.

The board has also directed the department to issue antlerless moose permits when the moose population is at or above the midpoint of the population objective with the goal of harvesting up to 1% of the cow moose population.

The board has made a positive customary and traditional use finding for all of Unit 13, with an amount reasonably necessary for subsistence of 300–600 moose for the entire unit.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. Antlerless moose hunts must be re-authorized annually by the board to comply with statutory requirements. These hunts are required to regulate the moose population within the established Intensive Management (IM) objectives for population size and harvest.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 105 – 5 AAC Hunting seasons and bag limits for moose. Eliminate the antlerless moose hunt in Unit 13.

PROPOSED BY: John Raich

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate the antlerless moose hunt (DM325) in Unit 13.

WHAT ARE THE CURRENT REGULATIONS? The following regulations pertain to the Unit 13 antlerless moose hunt. For a detailed description of the complete Unit 13 moose hunt structure please refer to Proposal 92.

- Resident hunters who successfully draw a Unit 13 antlerless moose drawing permit (DM325) are permitted one antlerless moose (no take of calves or cows accompanied by a calf) October 1–31 and March 1–31; up to 200 permits may be issued. Ten permits were issued in 2017.
- There is a positive C&T finding for moose in Unit 13 with an ANS of 300–600 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Harvest opportunity for antlerless moose would be eliminated in Unit 13. The department would not have the ability to curb moose population growth or prevent overpopulation when portions of Unit 13 moose habitat become saturated with cow moose that often occurs with bull-only harvest.

BACKGROUND: In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity (aside from the resident draw permits) with an earlier starting date for the CSH hunt in Unit 13 (August 10), which was changed to the current start date (August 20) effective RY2016. An antlerless moose hunt (DM325) was added to the Unit 13 hunt structure in RY2012. The board has also directed the department to issue antlerless moose permits when the moose population is at or above the midpoint of the population objective with the goal of harvesting up to 1% of the cow moose population. Ten permits have been issued annually, an average of eight hunters report hunting annually, and an average of five moose are harvested annually; currently the hunt area encompasses a central swath of Unit 13A. An “any bull” draw hunt (DM324) was added to the hunt structure in RY2016; since then five DM324 permits have been issued annually in Unit 13. Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

The number of hunters that have reported hunting in Unit 13 has steadily increased since 2004 (Figure 105-1). An average of 812 moose was harvested annually in Unit 13 since 2004; the average since the hunt structure was modified in 2009 has risen to 910 moose harvested annually. General season resident hunters (harvest ticket September 1–20) harvested an average of 618 moose annually in Unit 13 since 2004 and an average of 660 moose annually since 2009.

Since 2004, there have been three years in which resident harvest of moose in Unit 13 on state permits was below 600 moose (2004, 2005, and 2007). Resident harvest, combined with federal harvest, has been above 600 moose every year since 2004.

Bull-to-cow ratios are close to management objectives in most subunits (Table 105-1). Moose harvest in Unit 13 has been increasing in recent years (Figure 105-1). Harvest does not appear to be having an adverse effect on bull-to-cow ratios anywhere other than in 13A, where the bull-to-cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 19.6 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull-to-cow ratios compared to other subunits.

The moose population in Unit 13 as a whole has been increasing since 2005 and is estimated to be near the maximum population objective (Figure 105-2). The results from recent browse and twinning surveys in 13A and 13B indicate that the moose populations in those areas may be reaching levels in which nutritional availability is below the optimal levels for maximum productivity. Antler-restricted hunts are necessary to control the harvest of bulls in hunts with high participation, while protecting middle-aged cohorts that are necessary to maintain an adequate number of breeding bulls annually, regardless of population density. Antlerless hunts are essential in maintaining appropriate moose population densities for the available habitat. Without decreasing the moose population through antlerless harvest, the productivity of the population will likely decline with a decreasing trend in harvest levels expected.

Table 105-1. Unit 13 moose population objectives, population estimates and sex ratios by subunit, RY2016

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030
Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
Bull:cow estimate ¹	24	36	34	72	35

¹ Average of most recent three years of data.

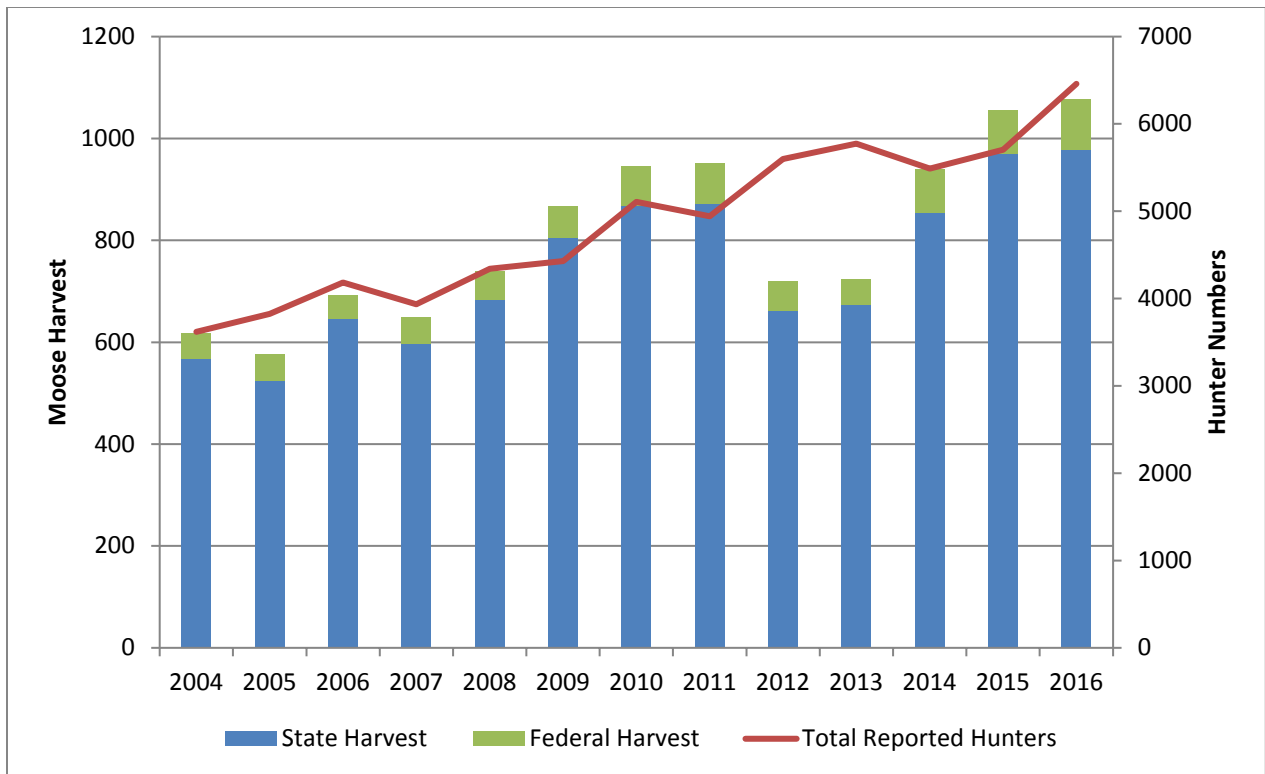


Figure 105-1. Total moose harvest and hunter participation in Unit 13, RY2004–2016.

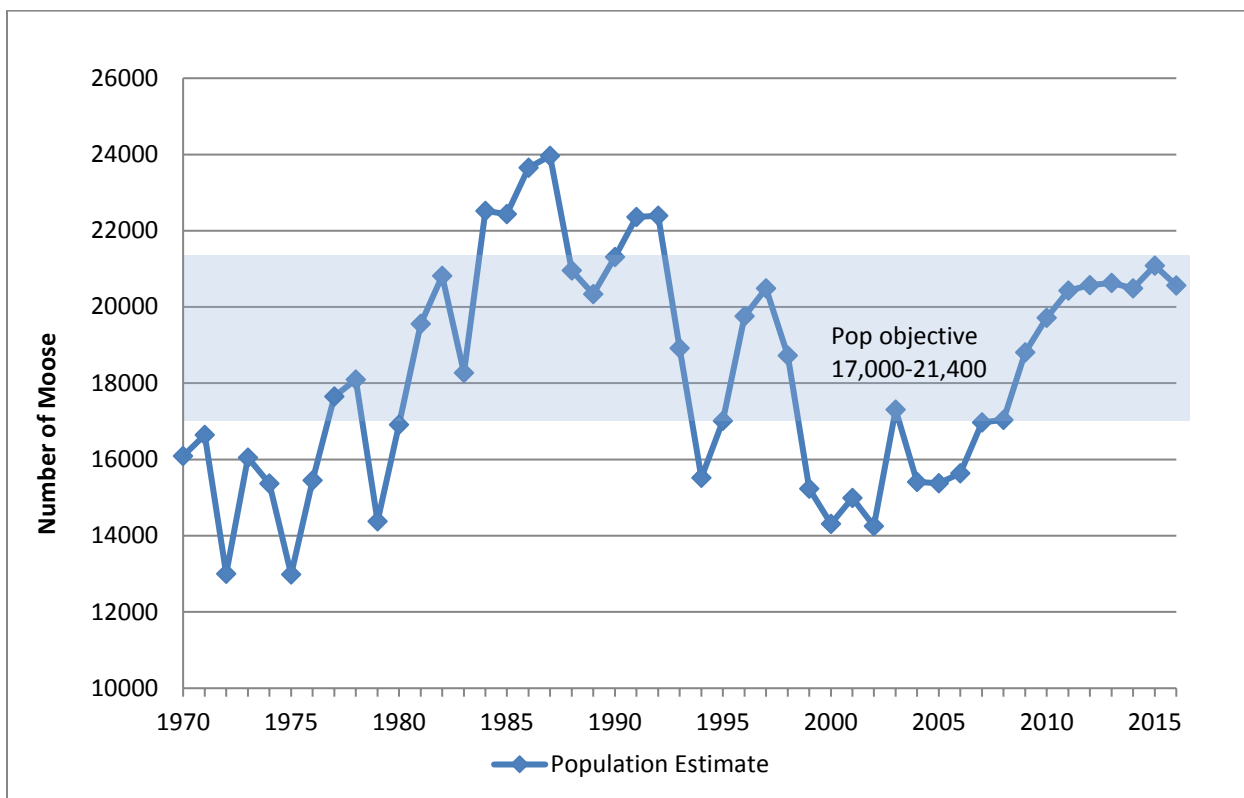


Figure 105-2. Estimated moose population in Unit 13 and aggregate of subunit population objectives, RY1970–2016.

DEPARTMENT COMMENTS: The department is **OPPOSED** to the elimination of antlerless moose hunt in Unit 13. Antlerless moose hunts are an essential tool in adaptive management to provide for optimum sustained yield and prevent overpopulation. The proposal associates antlerless moose hunts with antler-restricted hunts; the two hunt strategies are unrelated.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 106 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Eliminate the drawing permit hunt DM324 for moose in Unit 13.

PROPOSED BY: John Raich

WHAT WOULD THE PROPOSAL DO? The proposal would eliminate the draw permit hunt (DM324) for any bull moose in Unit 13.

WHAT ARE THE CURRENT REGULATIONS? Resident hunters who successfully draw a Unit 13 bull moose drawing permit (DM324) are permitted one bull from September 1–20. Up to five permits may be issued and all five permits were issued in 2017. There is a positive C&T finding for moose in Unit 13 with an ANS of 300–600 moose.

For a detailed description of the complete Unit 13 moose hunt structure please refer to Proposal 92.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Harvest opportunity for resident hunters who successfully draw a bull moose permit for Unit 13 (DM324) would be eliminated.

BACKGROUND: In March 2009, the board established the current ANS of 300–600 moose in Unit 13. The board developed the current hunt structure for resident moose hunting opportunity (aside from the resident draw permits) with an earlier starting date for the CSH hunt in Unit 13 (August 10), which was changed to the current start date (August 20) effective RY2016. An antlerless moose hunt was added to the Unit 13 hunt structure in RY2012. An “any bull” draw hunt (DM324) was added to the hunt structure in RY2016; since then five DM324 permits have been issued annually in Unit 13. Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

The number of hunters that have reported hunting in Unit 13 has steadily increased since 2004 (Figure 106-1). An average of 812 moose were harvested annually in Unit 13 since 2004; the average since the hunt structure was modified in 2009 has risen to 910 moose harvested annually. General season resident hunters (harvest ticket September 1–20) harvested an average of 618 moose annually in Unit 13 since 2004 and an average of 660 moose annually since 2009.

Since 2004, there have been three years in which resident harvest of moose in Unit 13 on state permits was below 600 moose (2004, 2005, and 2007). Resident harvest, combined with federal harvest, has been above 600 moose every year since 2004.

Bull-to-cow ratios are close to management objectives in most subunits (Table 106-1). Moose harvest in Unit 13 has been increasing in recent years (Figure 106-1). Harvest does not appear to be having an adverse effect on bull-to-cow ratios anywhere other than in 13A, where the bull-to-cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 19.6 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull-to-cow ratios compared to other subunits.

Table 106-1. Unit 13 moose population objectives and 2016 estimates

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030
Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
Bull:cow estimate ¹	24	36	34	72	35

¹ Average of most recent three years of data.

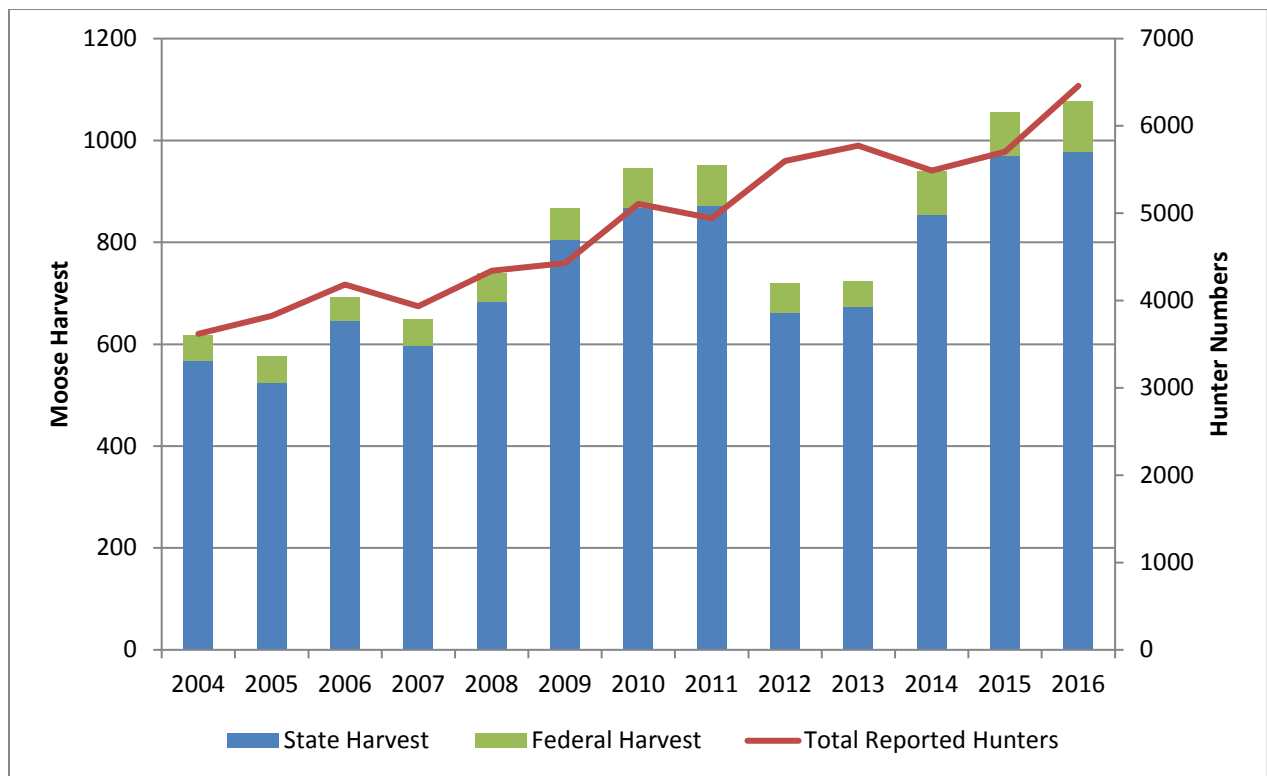


Figure 106-1. Total moose harvest and hunter participation in Unit 13, RY2004–2016.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose harvests in Unit 13. There are excess bulls available for harvest in some subunits.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 107 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Open a late resident hunting season for moose in Units 11 and 13.

PROPOSED BY: Aaron Bloomquist

WHAT WOULD THE PROPOSAL DO? Additional moose hunting opportunity would be available for resident hunters to take one bull by registration permit from November 15–30. Permits would be issued in Unit 13 communities starting November 13; a limited number of permits would be available for Unit 11 and each subunit of Unit 13, and hunters could obtain only one permit per season. Permits would only be issued for subunits that exceed bull-to-cow ratio management objectives by more than five bulls:100 cows.

WHAT ARE THE CURRENT REGULATIONS? For a complete description of the CSH hunt structure, see Proposal 92.

Unit 11

The Board of Game has made a positive customary and traditional use finding for moose in Unit 11 and found that 30–40 moose are reasonably necessary for subsistence in that unit. Hunters who wish to hunt moose in Unit 11 may do so under the following seasons and bag limits:

In that portion east of the east bank of the Copper River upstream from and east of the east banks of the Slana River:

- Resident hunters with CSH harvest permits may harvest one bull from August 10–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side.
- Resident hunters with an RM291 registration permit have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side from August 20–September 17.
- Federally qualified hunters with an RM291 registration permit have a bag limit of one antlered bull from August 20–September 20.
- Non-resident hunters with an RM291 registration permit have a bag limit of one bull with 50-inch antlers or antlers with three or more brow tines on at least one side from August 20–September 17.

In that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain:

- Federally qualified hunters with a federal registration permit have a bag limit of one antlered bull from August 20–September 20 (FM1106) or one bull from November 20–December 20 (FM1107).

In the remainder of Unit 11:

- Resident hunters with CSH harvest permits may harvest one bull from August 10–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side.
- Resident or non-resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with three or more brow tines on at least one side from August 20–September 20.
- Federally qualified hunters with an FM1106 federal registration permit have a bag limit of one antlered bull from August 20–September 20.

Unit 13

The Board of Game has made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose. Hunters who wish to hunt moose in Unit 13 may do so under the following seasons and bag limits:

- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- Resident hunters who successfully draw a Unit 13 bull moose drawing permit (DM324) are permitted one bull from September 1–20. Up to five permits may be issued, and all 5 permits were issued in 2017.
- Resident hunters who successfully draw a Unit 13 antlerless moose drawing permit (DM325) are permitted one antlerless moose (no take of calves or cows accompanied by a calf) October 1–31 and March 1–31; up to 200 permits may be issued. Ten permits were issued in 2017.
- Resident hunters with CSH harvest permits in Unit 13 may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side.
- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents who successfully draw a Unit 13 drawing permit (DM335–DM339) are permitted one bull with 50-inch antlers or antlers with four or more brow tines on at least one side. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20. Federal permits are valid for federal lands only.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Resident hunters would have increased opportunity to harvest a moose in Unit 11 or Unit 13; the hunting season would be during a time that bulls can be found in post-rut aggregations, many moose have moved out of the hills into more accessible areas where weather and snow conditions often allow for easier access to moose via snowmachine. Moose harvests would likely increase and bull-to-cow ratios would likely decrease but the proposal includes tools to limit the potential for adverse biological impacts such as limited and flexible permit numbers as well as bull-to-cow ratio thresholds.

BACKGROUND: The board developed the current hunt structure for resident moose hunting opportunity (aside from the resident draw permits) with an earlier starting date for the CSH hunt in Unit 13 (August 10), which was changed to the current start date (August 20) effective RY2016; the Unit 11 start date remained August 10. RM291 was added to the Unit 11 hunt structure effective RY2012.

The number of state hunters that have reported hunting in Unit 11 has remained relatively stable since RY2012, when the average number of state hunters reported in Unit 11 rose from 116 (RY2007-2011) to 175 (RY2012-2016) following the implementation of the RM291 hunt (Figure 107-1). Reported moose harvest has remained relatively stable with an average of 51 moose (both state and federal hunts combined) harvested annually over the past decade (Figure 107-1).

The department monitors one moose trend count area in Unit 11, which has shown an increase in total moose over recent years, but a decrease in bull:cow ratios (Table 107-1). Average bull:cow ratio between RY1996 and RY2006 was 112, whereas the average bull:cow ratio observed since RY2008 is 68. Bull:cow ratios remain high enough to sustain additional harvest.

An antlerless moose hunt was added to the Unit 13 hunt structure in RY2012. Ten permits have been issued annually and an average of five moose are harvested under those permits annually. An “any bull” draw hunt (DM324) was added to the hunt structure in RY2016; since then five DM324 permits have been issued annually in Unit 13. Five moose were harvested in 2016 and three moose were harvested in 2017. All permit recipients for both years reported hunting.

The number of hunters that have reported hunting in Unit 13 has steadily increased since 2004 (Figure 107-2). An average of 812 moose were harvested annually in Unit 13 since 2004; the average since the hunt structure was modified in 2009 has risen to 910 moose harvested annually. General season resident hunters (harvest ticket September 1–20) harvested an average of 618 moose annually in Unit 13 since 2004 and an average of 660 moose annually since 2009.

Since 2004, there have been three years in which resident harvest of moose in Unit 13 on state permits was below 600 moose (2004, 2005, and 2007). Resident harvest, combined with federal harvest, has been above 600 moose every year since 2004.

Bull-to-cow ratios are above objectives in most units, but in accessible areas, the abundance of legal bulls is often reported as diminished (Table 107-2). Moose harvest in Unit 13 has been increasing in recent years (Figure 107-2). Harvest does not appear to be having an adverse effect on bull:cow ratios anywhere other than in 13A, where the bull:cow ratio has fluctuated between 20 and 30 bulls:100 cows since 2002; 19.6 bulls:100 cows were observed in 2016. The highly accessible nature of 13A likely contributes to the lower bull:cow ratios compared to other subunits.

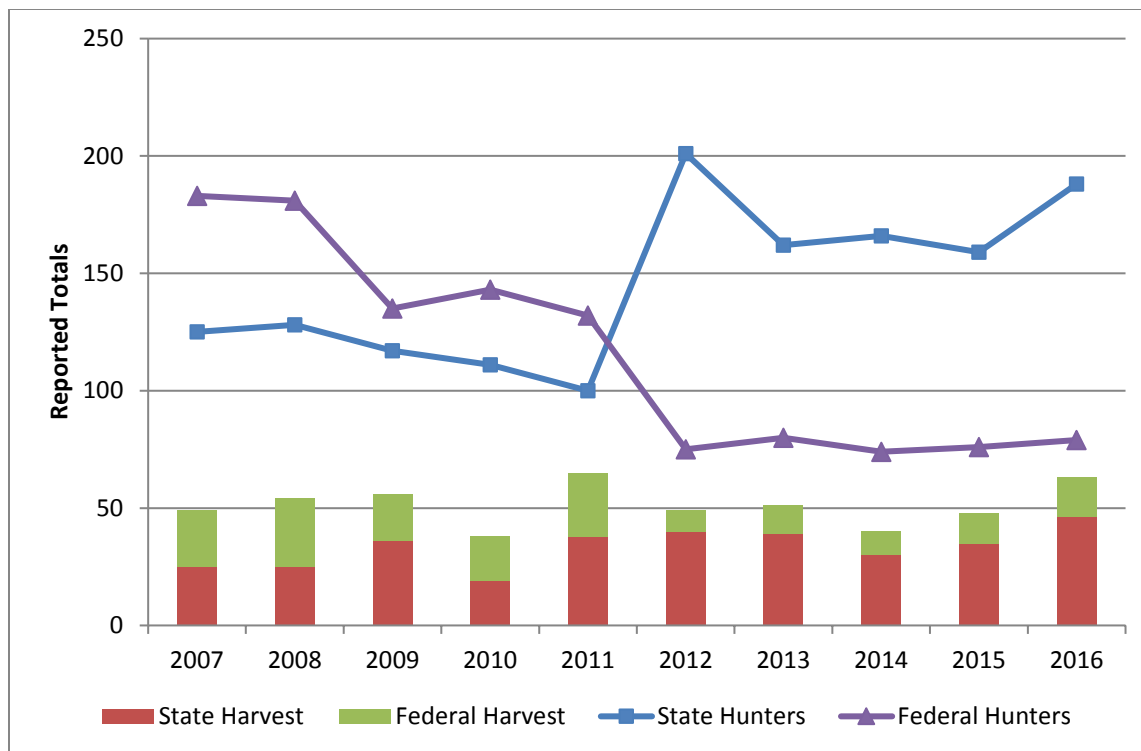


Figure 107-1. Total moose harvest and hunter participation reported in Unit 11, RY2007-2016.

Table 107-1. Unit 11 moose trend count observations, RY2008-2017.

Year	Bull:100 Cow	Calf:100 Cow	Total Moose	Survey Conditions
2008	73	17	164	Good/excellent
2011	71	21	265	Good
2012	84	13	282	Good
2013	88	26	221	Good
2015	50	23	230	Fair
2017	41	18	324	Good

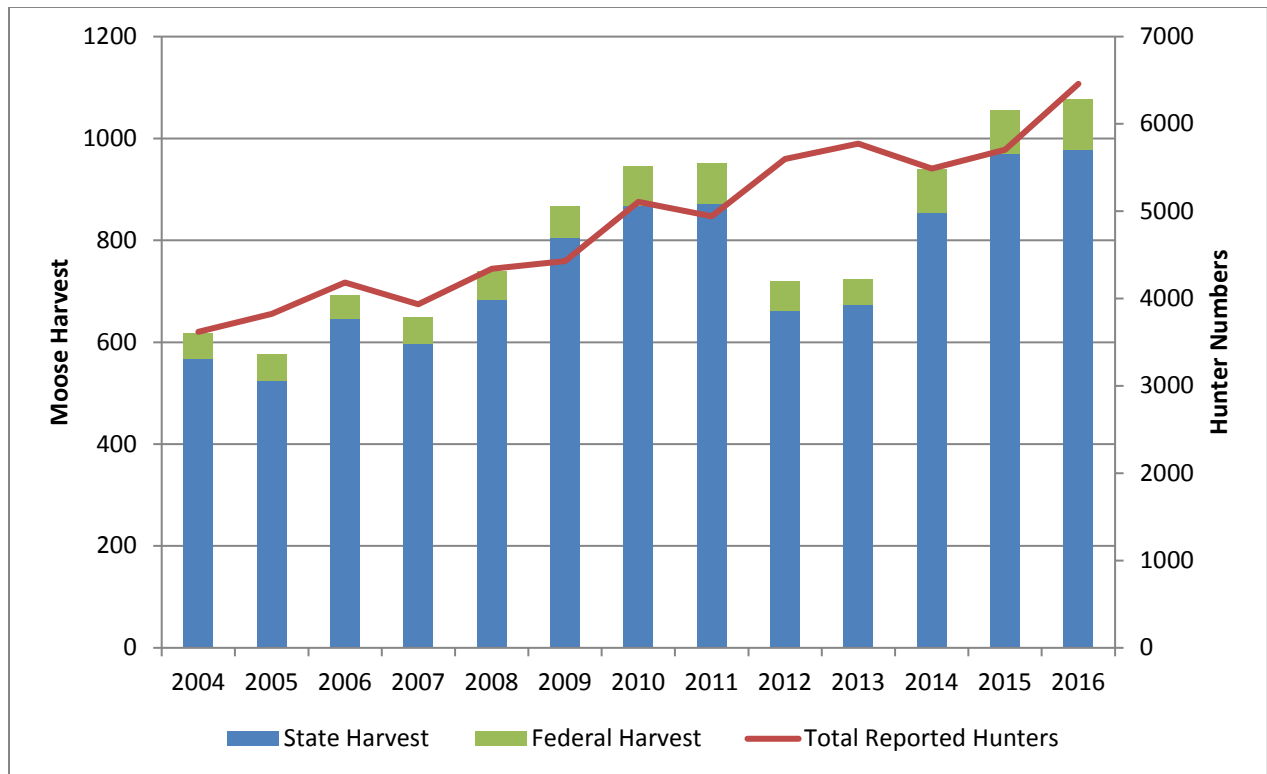


Figure 107-2. Total moose harvest and hunter participation in Unit 13, RY2004-2016.

Table 107-2. Unit 13 moose population objectives, population estimates, and sex ratios by subunit, RY2016.

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E
Population Objective	3,500–4,200	5,300–6,300	2,000–3,000	1,200–1,900	5,000–6,000
2016 population abundance estimate	4,320	4,970	3,830	1,400	6,030
Bull:cow Objective	25:100	25:100	25:100	25:100	25:100
Bull:cow estimate (average of most recent three years)	24	36	34	72	35

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation of moose harvests in Units 11 and 13. The proposal includes adaptive management tools by which the new hunt may be managed in such a way as to prevent adverse biological effects from increased harvest. If adopted, the department anticipates that there will be a significant amount of demand for the limited permits available; issuing high-demand permits in-person on a first-come, first-serve basis continues to be problematic for the department and for the public.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 108 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Change the antler restrictions for moose in Unit 13.

PROPOSED BY: John Raich

WHAT WOULD THE PROPOSAL DO? Amend the antler restrictions to allow hunters to harvest a moose with three or more brow tines on at least one side. It is not clear whether this amendment is intended to apply to all antler restricted hunts in Unit 13 (CM300, GM000, DM335–339), or solely to hunters with harvest tickets as listed in the proposal.

WHAT ARE THE CURRENT REGULATIONS? The Board of Game has made a positive C&T finding for moose in Unit 13, with an ANS of 300–600 moose. Hunters who wish to hunt moose in Unit 13 may do so under the following seasons and bag limits:

- Resident hunters with general season harvest tickets have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side from September 1–20.
- Resident hunters who successfully draw a Unit 13 bull moose drawing permit (DM324) are permitted one bull from September 1–20. Up to five permits may be issued and all five permits were issued in 2017.
- Resident hunters who successfully draw a Unit 13 antlerless moose drawing permit (DM325) are permitted one antlerless moose (no take of calves or cows accompanied by a calf) October 1–31 and March 1–31; up to 200 permits may be issued. Ten permits were issued in 2017.
- Resident hunters with CSH harvest permits in Unit 13 may harvest one bull from August 20–September 20 (CM300). The board has established an allocation of 100 “any bull” moose (bull moose that do not meet general season antler restrictions for the fall CSH season). Once area-specific quotas for “any bull” harvest have been met, the bag limit is changed by emergency order to one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side.
 - Locking tags allowing the take of an “any bull” are distributed based on scoring criteria to determine the customary and direct dependence on the game population by the subsistence user for human consumption as a mainstay of livelihood. CSH hunters who are not in possession of an “any bull” locking tag have a bag limit of one bull with spike-fork antlers or 50-inch antlers or antlers with four or more brow tines on at least one side.
- CSH moose hunt participants (recipients of CM300, and all household members) must apply as part of a community or group of at least 25 individuals and must make a two-year commitment. Applicants who do not provide required information are removed from the application pool. A hunting license is not required to qualify as a group member.
- The group coordinator must submit an annual Community Subsistence Hunt Coordinator Report on a form provided by the department. If the coordinator fails to do so, all group participants will be placed on the Failure to Report (FTR) list and will not be eligible to

participate in the CSH hunt during the following regulatory year, but will be bound by the conditions of the hunt.

- A winter registration hunt (RM319) and a winter CSH hunt (CM301) to take one bull from December 1–31 were authorized by the Board of Game, but have not been implemented by the department since 2014 due to concerns about high levels of participation and the ability to manage the hunt within biologically sustainable limits.
- Nonresidents who successfully draw a Unit 13 drawing permit (DM335–DM339) are permitted one bull with 50-inch antlers or antlers with four or more brow tines on at least one side. Up to 150 permits may be issued; 115 permits were issued in 2017.
- Federal subsistence regulations provide additional opportunity for residents of Units 12, 13, 20A, and 20D. Alaska residents who qualify to hunt under federal regulations may obtain a permit (FM1301) to harvest one antlered bull per household in Unit 13E or one antlered bull per person in the remainder of Unit 13. The federal season dates are August 1–September 20. Federal permits are valid for federal lands only.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Of the moose that are protected under current antler restrictions, the older breeding animals (less than 50-inch antlers with no more than three brow tines on either side, but three brow tines on at least one side) would be available for harvest. Many bulls in Unit 13 with less than 50-inch antlers have three brow tines on at least one side; moose harvest would likely increase under this regulation and bull-to-cow ratios would likely decrease, particularly in Unit 13A.

The board would need to determine if this added opportunity applies to all resident and nonresident antler-restricted hunts in Unit 13 or only select hunts.

BACKGROUND: Current antler restrictions in Unit 13 allow for adequate opportunity while restricting harvest sufficiently to maintain bull-to-cow ratios above the unitwide objective of 25 bulls to 100 cows (Table 108-1). Annual moose surveys in Unit 13 document many moose with three brow tines on at least one side that do not meet current 50-inch antler restrictions.

In 2016, a post-hunt survey of one moose trend count area (CA) in 13A (intensive survey of a 581 square mile area) observed 23 moose with three brow tines on at least one side, no more than three brow tines on either side, and less than 50-inch antlers, out of a total of 159 bulls observed (14.5%). Of the 159 bulls observed in the trend count area, one bull had 50-inch or greater antlers, three bulls had four or more brow tines on at least one side, and 33 bulls were spike/fork; of the adult bulls (126 bulls larger than spike/fork) available to breed after the hunting season, 3% of them could have been legally harvested during the hunting season.

Allowing the harvest of bulls with three or more brow tines on at least one side would allow for up to 23 additional bulls to be harvested in that particular CA in 2016 which accounts for an additional 18% of the adult bulls that were left in the CA after the hunting season. If all 23 of the additional bulls are harvested, the bull:cow ratio in that CA would drop from 19.6 bulls:100 cows to 16.7 bulls:100 cows. Of those 23 moose that would be available for additional harvest, 15 of them (65%) had antlers larger than the average antler size observed among the 126 adults

(37 inches), indicating that much of the additional opportunity would be for the more mature bulls that are currently protected.

Table 108-1. Unit 13 moose bull-to-cow ratios by subunit, RY2011-2016.

Regulatory Year	Bulls: 100 Cows				
	13A	13B	13C	13D	13E
Objective	25	25	25	25	25
2011	26.4	35.4	29.7	62.0	30.7
2012	26.0	33.2	30.1	67.4	31.7
2013	21.1	38.3	43.8	89.4	34.0
2014	27.5	37.7	37.2	69.1	41.1
2015	24.7	36.7	30.3	58.3	24.6
2016	19.6	34.1	34.3	88.9	39.7

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal because an increase in the harvest of bulls may create a biological concern in some areas and the proposal targets the more mature bulls that are protected by the current antler restrictions – which are an important component of the breeding population. The current level of harvest does not present a biological concern, but increasing the harvest of bull moose may reduce the bull-to-cow ratio below objectives in some areas, particularly in 13A. The board may wish to consider this regulation for subunit 13D, where high bull-to-cow ratios are consistently observed, but this regulation would not be recommended for the other subunits, particularly as an excess of 100 “any-bull” harvests are currently available in Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 109 – 5 AAC 85.055. Hunting seasons and bag limits for Dall sheep. Change the “any ram” bag limit to “full-curl ram” for the Dall sheep permit hunts in Units 13D and 14A.

PROPOSED BY: Brett Barringer

WHAT WOULD THE PROPOSAL DO? The proposal changes the bag limit for Dall sheep in Units 13D and 14A from any ram to full curl or larger, or a ram with the tips of both horns broken, or a ram at least eight years of age or older.

WHAT ARE THE CURRENT REGULATIONS?

- Sheep drawing permit hunts in Units 13D and 14A are authorized for the Chugach Mountains with seasons that occur from August 10–September 20 (Figure 109-1).
- The drawing permit hunts in Unit 14A are divided into three hunt areas to distribute harvest and hunting pressure (DS170–DS295). These hunts have an any-ram bag limit with 10% of the drawing permits allocated to nonresident hunters.
- The Taz-West hunt area (DS160 and DS260) includes the western portion of Unit 13D from the Tazlina Glacier, Tazlina Lake, and the western shore of Mendeltna Creek to the

Unit 14A boundary. The bag limit is any ram with 20% of the drawing permits allocated to nonresident hunters.

- The Taz-East hunt area (DS165 and DS265) includes the eastern portion of 13D from the Richardson Highway to the boundary of Taz-West. These hunts have a full-curl bag limit with 20% of the permits allocated to nonresident hunters.
- The remainder of both units are managed with a full-curl bag limit and hunting is done with a general season harvest ticket (GS000).

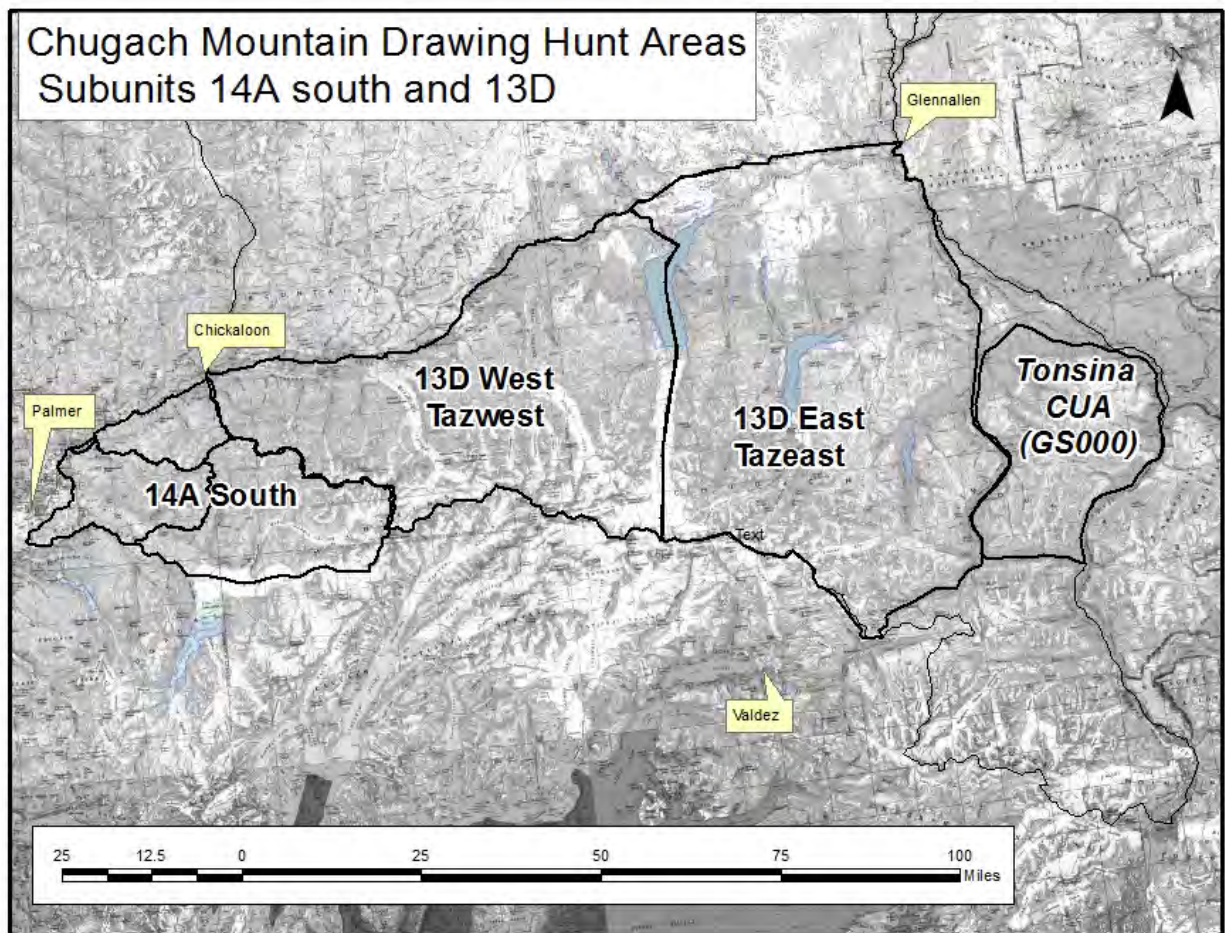


Figure 109-1: Map of Dall sheep drawing permit hunt areas in Units 13D and 14A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal changes the management direction for sheep hunts in the Chugach Mountain portions of Units 13D and 14A to a full-curl management system.

The current hunt structure was designed to improve hunt quality by reducing “hunter crowding” through a drawing permit hunt structure, which reduced the number of hunters in the field by 68% in Unit 14A and 76% in 13D. The proposed strategy will potentially increase the number of hunters in the field by allowing the department to issue more permits (potentially decreasing the quality of the hunting experience) and is expected to result in an equally sustainable harvest.

As a result of limitations to sightability and classification error, quantifying the total number of full curl rams in a population during surveys remains problematic. Surveys underestimate the number of full-curl rams available for harvest. Incomplete and partial survey coverage of the hunt areas also makes it challenging to determine the number of permits to issue annually.

BACKGROUND: The board adopted the current regulations in 2007 following a decline in sheep numbers and continued high hunting pressure. The regulatory changes included the establishment of a drawing hunt structure in the Chugach Mountain areas, liberalization of bag limits in some areas to include any-ram hunts, and the allocation of harvest opportunity between residents and nonresidents.

In an attempt to discern differences between the two hunt strategies, the board divided Unit 13D west of the Richardson Highway into two draw hunt areas with the portion of Unit 13D from the Richardson Highway to the Tazlina Glacier, Tazlina Lake, and the west bank of Mendeltna Creek (Taz-East) with a full curl bag limit and the portion west of that line (Taz-West) with an “any ram” bag limit.

The primary limitations on sheep abundance in the Chugach Mountains appear to be nutrition and stochastic factors that affect productivity and survival. The Unit 14A sheep population appears to be stable, while the Unit 13D population appears to be declining primarily due to a decrease in the number of ewes and lambs observed during surveys. Recent sheep research in Unit 13D found that sheep are nutritionally stressed.

Unit 14A, Chugach Mountains

After the any ram drawing hunts were implemented in Unit 14A, sheep harvest decreased from an average of 24 rams (2000–2007) to 15 rams (2008–2017) (Table 109-1). The current level of harvest is sustainable and has not had a negative impact on the sheep population (Table 109-2). The reduced harvest was a direct result of limiting the number of hunters that could participate in the hunt under the new draw permit system. Hunter success increased from 22% to 37% after the drawing permit hunt was implemented. The horn size of sheep harvested decreased from an average of 36 inches to 32 inches during the same period– a result of the opportunity to take less than full-curl sheep.

Table 109-1. Unit 14A Dall sheep hunts and harvest, regulatory years 2000 through 2017.

Regulatory Year	Total Permits	Total Hunters	Total Harvest	% Success	Average Length of Longest Horn	Average Age
<i>Pre-Draw</i>						
2002	-	104	20	19%	34.5	8.4
2003	-	103	22	21%	35.9	8.9
2004	-	113	32	28%	36.1	8.5
2005	-	104	29	28%	36.5	8.4
2006	-	125	24	19%	36.1	8.5
2007	-	104	22	21%	35.4	8.6
<i>Post-Draw</i>						
2008	40	17	8	47%	32.8	6.7
2009	40	25	9	36%	28.0	5.9

2010	40	25	6	24%	29.4	6.7
2011	50	42	14	33%	35.0	7.4
2012	50	43	13	30%	32.2	6.8
2013	75	39	18	46%	30.6	6.9
2014	75	49	17	35%	33.4	7.2
2015	75	52	22	42%	32.5	7.3
2016	75	53	15	28%	32.5	7.5
2017	75	54	25	46%	30.8	6.5

Table 109-2. Unit14A Dall sheep survey composition results and harvest, regulatory years 2000 through 2017.

Survey Year	Total Rams Observed	≥ Full curl Rams Observed	≥ Full curl Harvested	% Full curl Harvested	Sub-full curl Observed	Sub-full curl Harvested	% Sub-full curl Harvested
1998	218	28	38	136%	190	0	0%
2002	276	19	32	168%	257	0	0%
2006	167	26	35	135%	141	0	0%
2007	145	18	34	189%	127	0	0%
2009	134	8	1	13%	126	8	6%
2010	167	14	3	21%	153	3	2%
2012	177	16	5	31%	161	8	5%
2013	168	11	6	55%	157	8	5%
2014	172	13	8	62%	159	11	7%
2017	254	14	7	50%	240	18	8%

Unit 13D, Taz-West, Chugach Mountains

After the any ram drawing hunts were implemented in Unit 13D, Taz-West, sheep harvest decreased from an average of 17 rams (1999–2007) to 4 rams (2008–2016) (Table 109-3). The current level of harvest is sustainable and has not had a negative impact on the sheep population (Table 109-4). The reduced harvest was a direct result of limiting the number of hunters that could participate in the hunt under the new draw permit system. Hunter success increased from 34% to 50% after the drawing permit hunt was implemented. The average horn size of sheep harvested has remained the same (36 inches).

Table 109-3. Unit 13D Taz-West Dall sheep hunts and harvest, RY2002–2016.

Regulatory Year	Total Permits	Total Hunters	Total Harvest	% Success	Average Length of Longest Horn	Average Age
<i>Pre-Draw</i>						
2002	-	61	12	20%	35.2	8.4
2003	-	52	22	42%	37.1	8.7
2004	-	62	29	47%	36.6	8.4
2005	-	50	21	42%	37.2	9.0
2006	-	43	10	23%	35.5	8.8
2007	-	47	13	28%	35.2	9.3
<i>Post-Draw</i>						
2008	10	6	3	50%	32.5	5.3
2009	10	6	3	50%	35.1	7.0
2010	10	6	3	50%	38.0	8.0
2011	10	8	3	38%	37.8	8.8
2012	12	11	8	73%	36.3	8.3
2013	16	13	6	46%	31.2	6.7
2014	16	10	2	20%	36.9	7.5
2015	12	7	5	71%	37.3	10.2
2016	12	7	4	57%	35.7	8.5

Table 109-4. Unit 13D Taz West Dall sheep survey composition results and harvest, RY2002–2016.

Survey Year	Total Rams Observed	≥ Full curl Rams Observed	≥ Full curl Harvested	% Full curl Harvested	Sub-full curl Observed	Sub-full curl Harvested	% Sub-full curl Harvested
2007	92	9	13	144%	83	0	0%
2008	124	30	1	3%	94	2	2%
2009	112	13.5	1	7%	98	2	2%
2012	122	22	7	32%	100	1	1%
2013	125	18	3	17%	107	3	3%
2014	105	7	2	28%	98	0	0%
2016	96	10	2	20%	86	2	2%

Unit 13D, Taz-East, Chugach Mountains

After the any ram drawing hunts were implemented in Unit 13D, Taz-West, sheep harvest decreased from an average of 28 rams (1999–2007) to nine rams (2008–2016) (Table 109-5). The current level of harvest is sustainable and has not had a negative impact on the sheep population (Table 109-6). The reduced harvest was a direct result of limiting the number of hunters that could participate in the hunt under the new draw permit system. Hunter success increased from 33% to 40% after the drawing permit hunt was implemented. The horn size of sheep harvested also increased from an average of 37 inches to 38 inches during the same periods.

Table 109-5. Unit 13D Taz-East Dall sheep hunts and harvest, RY2002–2016.

Regulatory Year	Total Permits	Total Hunters	Total Harvest	% Success	Average Length of Longest Horn	Average Age
<i>Pre-Draw</i>						
2002	-	82	33	40%	34.7	8.1
2003	-	96	42	44%	36.4	8.9
2004	-	100	36	36%	36.4	8.4
2005	-	87	25	29%	37.7	8.5
2006	-	60	16	27%	37.5	8.7
2007	-	96	18	19%	36.7	9.0
<i>Post-Draw</i>						
2008	41	23	3	13%	38.5	8.3
2009	41	22	10	45%	37.6	7.6
2010	41	26	13	50%	38.3	7.8
2011	41	32	19	59%	38.9	8.6
2012	50	38	11	29%	39.0	8.8
2013	50	24	8	33%	39.2	9.4
2014	25	13	9	69%	37.2	8.9
2015	25	16	4	25%	36.8	7.3
2016	25	10	4	40%	37.6	9.3

Table 109-6. Unit 13D Taz East Dall sheep survey composition results and harvest, RY2006–2016.

Survey Year	Total Rams Observed	≥ Full curl Rams Observed	≥ Full curl Harvested	% Full curl Harvested	Sub-full curl Observed	Sub-full curl Harvested	% Sub-full curl Harvested
2006	132	19	16	84%	113	0	0%
2007	125	13	18	138%	113	0	0%
2009	76	20	8	40%	56	2	4%
2010	115	27	12	44%	88	1	1%
2012	100	21	11	52%	79	0	0%
2014	103	12	8	67%	107	1	<1%
2016	91	11	3	27%	80	1	1%

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because either management strategy (current and proposed strategies) can be used to sustainably manage sheep in Units 14A and 13D. The current management strategy has not resulted in a decrease in the number of sheep or the number of rams observed during surveys and provides unique opportunity to take without the pressure of determining full curl.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 110 – 5 AAC 85.040. Hunting seasons and bag limits for goat. Change the drawing permit hunt for goat in Unit 13 to a registration hunt.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would change the Unit 13D drawing hunt (DG720) into a registration hunt retaining the current August 10–November 30 season.

WHAT ARE THE CURRENT REGULATIONS?

- Resident hunters can take one goat by registration permit (RG580) from September 1–November 30 in Unit 11 and the portion of 13D south of the Tiekel River and east of a line beginning at the confluence of the Tiekel and Tsina Rivers.
- Resident hunters can take one goat by drawing permit (DG720) from August 10–November 30 in the remainder of Unit 13D.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would convert the current drawing goat hunt in the remainder of 13D (DG720) to a registration goat hunt. If the proposal is adopted goat hunting opportunity would be provided to everyone that registers for the hunt, and depending on harvest quota would likely result in an increase in the Unit 13D harvest.

BACKGROUND: Due to infrequent or incomplete surveys, poor survey conditions, and challenges associated with conducting aerial wildlife surveys in montane habitats, it has been difficult to estimate the goat population for Unit 13D (Table 110-1). An absence of consistent and comprehensive survey data makes detecting significant population trends additionally difficult. However, the information available suggests that the goat population in Unit 13D remains small and stable.

Table 110-1. Unit 13D remainder mountain goat composition counts, calendar years 2011–14 and 2016.

	Adults (%)		Kids (%)		Kids: 100 adults	Goats Observed
2011 ^a	85	(83)	17	(17)	20	102
2012 ^b	208	(84)	39	(16)	19	247
2013 ^c	15	(79)	4	(21)	27	19
2014 ^d	107	(84)	20	(16)	19	127
2016 ^e	140	(90)	16	(10)	11	156

^a Partial surveys conducted incidental to sheep surveys (count areas 16–18).

^b Partial surveys conducted incidental to sheep surveys (count areas 1–3, 5, 9, and 16–18).

^c Partial surveys conducted incidental to sheep surveys (count areas 1–2, 16–17).

^d Partial surveys conducted incidental to sheep surveys (count areas 1–3, 5, 9, 11–13, and 16–18).

^e Partial surveys conducted incidental to sheep surveys (count areas 1–3, 5, 9, 11–13, and 16–18).

While predation on goats undoubtedly occurs, it is suspected that the mountain goat population populations in Unit 13 are regulated primarily by winter weather. Goat population declines have been documented in Unit 13 following deep snowfalls.

Beginning in 2011, drawing hunts DG718 and DG719 were combined to make a single drawing hunt – DG720. The majority of goat hunting in Unit 13D occurs during the drawing hunt (Table 110-2). Additional hunting occurs in a small portion of Unit 13D through registration hunt RG580 (Table 110-3).

Table 110-2. Unit 13D goat draw permits (DG720) and harvest, RY2012–2016.

	Applicants	Permits	Hunted	Harvest
2012	474	35	15	3
2013	492	50	22	10
2014	519	35	16	6
2015	582	50	17	10
2016	634	35	21	5

Table 110-3. Units 11 and 13 goat registration permits (RG580) and harvest, RY2012–2016.

	Res Permits	Non Res Permits	Hunted	Harvest (13D) ¹
2012	22	7	11	3 (0)
2013	41	11	28	8 (0)
2014	25	13	19	9 (2)
2015	40	6	21	6 (3)
2016	30	13	26	13 (6)

¹ Goats harvested within the Unit 13D portion of the RG580 hunt area indicated in parenthesis.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The quota would likely be conservative during the initial years. If the proposal is adopted, the department recommends that the board allows the department to use its discretion in establishing separate permit hunts with separate harvest quotas to distribute harvest in a sustainable manner.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 111 – 5 AAC 85.015. Hunting seasons and bag limits for black bear; 85.020. Hunting seasons and bag limits for brown bears; and 92.044. Permit for hunting black bear with the use of bait or scent lures. Open a fall season for hunting brown and black bear over bait in Unit 13.

PROPOSED BY: Dan Montgomery

WHAT WOULD THE PROPOSAL DO? This proposal would create a fall black and brown bear baiting season in Unit 13 with season dates of August 25–October 15. The brown bear hunt will be by registration permit only.

WHAT ARE THE CURRENT REGULATIONS?

Black Bear:

- Resident and nonresident hunters can take three black bears every regulatory year in Unit 13 with no closed season.
- Black bear hunters may bait black bears in Unit 13 from April 15–June 30.
- A registered guide may operate up to ten bait stations at a time in each guide use area that they are registered to operate in.
- Bait may be used in Units 11 and 13, Copper River north of Miles Lake within one mile of seasonally occupied cabins, provided the cabin is on the opposite side of the river from the bait site.
- Bait may not be used within one-quarter mile of the Alyeska pipeline and pipeline access road from mile 75 of the Richardson HWY (where the pipeline crosses the Tonsina River) north to the unit boundary at mile 227 of the Richardson Hwy (Black Rapids).
- Bear baiting is prohibited in Unit 13E within Denali State Park.

Brown Bear:

- Resident and nonresident hunters can take one brown bear every regulatory year in Denali State Park from August 10–June 15.
- Resident and nonresident hunters can take one brown bear every regulatory year in the remainder of Unit 13 with no closed season.
- Brown bear hunters may bait brown bears in Unit 13 from April 15–June 30.
- Resident hunting tags are not required to hunt brown bears in Unit 13.
- A registered guide may operate up to ten bait stations at a time in each guide use area that they are registered to operate in.
- Bait may be used in Unit 11 and 13, Copper River north of Miles Lake within one mile of seasonally occupied cabins, provided the cabin is on the opposite side of the river from the bait site.
- Bait may not be used within one-quarter mile of the Alyeska pipeline and pipeline access road from mile 75 of the Richardson HWY (where the pipeline crosses the Tonsina River) north to the unit boundary at mile 227 of the Richardson Hwy (Black Rapids).
- Bear baiting is prohibited in Unit 13E within Denali State Park.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted, this proposal would expand black and brown bear baiting opportunity in Unit 13 to include a fall baiting season except in Unit 13E within Denali State Park. Recent data suggest that the Unit 13 brown bear population is in decline under the current hunt structure, though the decline is likely not steep enough to cause immediate concern. Adding a fall bear baiting season will result in an increase in the black and brown bear harvest but the take is expected to be relatively low. The new fall brown bear over bait hunt will be by registration permit only, which will be in addition to the requirement to register each bait site. This will allow the department to close the hunt, or portions of the hunt area, quickly in the event the harvest quota is reached.

BACKGROUND: Black bear densities in the favorable habitats within Unit 13 are thought to be similar to densities in other portions of southcentral Alaska. A black bear population estimate was conducted in 1985 along a portion of the upper Susitna River in conjunction with the Susitna Hydroelectric Project, resulting in a density estimate of 90 black bears/1,000 km². Subsequent research, field observations, and harvest data indicate black bears are abundant in portions of 13D and western 13E. A unitwide population estimate for Unit 13 has not been attempted because of the difficulty of observing black bears in the higher density forested portions of 13D. Black bear hunting has become increasingly popular in Unit 13, and harvest has increased since the 1990s. An average of 168 black bears were harvested in Unit 13 over the last ten years (Table 111-1), an increase of 50 bears from the previous ten years. Over the last five regulatory years an average of 169 black bears (69% male) were harvested in Unit 13. A record number of 215 black bears were harvested during regulatory year 2016. More black bears are harvested in the spring than fall in Unit 13 (Table 111-2). In 2011 a regulation change eliminated the black bear sealing requirement in Unit 13. This regulation change resulted in a loss of black bear baiting data. While hunters were still required to possess a black bear harvest ticket, and submit a harvest report, bear baiting data was not captured on harvest reports.

Recent brown bear population data are available for only limited portions of Unit 13. In May 2011, a capture-mark-resight survey was conducted in western 13A. Survey results indicated a density of 16.3 independent bears /1,000 km², and subsequent analysis suggests that the Unit 13 brown bear population declined at a rate of 4% per year ($\lambda = 0.958$; 95% CI = 0.907–1.002) between 2006–2011. However, comparison of density estimates from 1998 and 2011 indicate a decline of 2.04% annually. Brown bear harvests in Unit 13 have been relatively stable since the mid-1990s, ranging from 103 to 166, with an average of 137 (60% male) over the last five regulatory years (regulatory years 2012–2017, Table 111-3). In 2013, the spring harvest of brown bears over bait was allowed in Unit 13D, resulting in a 116% increase in the Unit 13D spring harvest, with 26 of 32 brown bears harvested over bait. During the spring of 2015 the harvest of brown bears over bait was allowed in all of Unit 13, and the spring harvest of brown bears increased by 137% from the previous year, with 41 of the 90 spring harvested brown bears taken over bait (Table 111-4). Bear baiting activity in Unit 13 has increased substantially over the past 10 years from 149 registered bait stations in 2007 to 252 in 2016 (Table 111-5). However, this has had little effect on annual harvest and likely represents a shift in seasons and methods.

The brown bear population in Unit 13 is thought to be above the management objective of 350 bears. However, there is no way to anticipate the amount of interest in this proposed opportunity or the increase in harvests that would occur if the proposal is adopted.

Table 111-1. Number of black bears harvested in Unit 13, regulatory years 2007–2016.

					Unit 13
Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E	Total ¹

2007	18	2	8	59	57	144
2008	19	4	5	91	67	188
2009	14	5	5	76	62	163
2010	18	3	7	90	77	196
2011	16	7	9	58	54	145
2012	7	4	10	50	45	117
2013	11	7	9	70	67	166
2014	12	9	3	89	60	173
2015	17	7	16	86	48	174
2016	21	4	16	102	72	215
Average	15.3	5.2	8.8	77.1	60.9	168.1

¹ Includes black bears with unknown harvest location.

Table 111-2. Chronology of black bear harvest in Unit 13, regulatory years 2012–2016.

	Fall	Spring	Total
2012 ¹	58	59	117
2013	56	110	166
2014	62	111	173
2015	36	135	171
2016	46	169	215

¹ After 2011 no sealing requirement for black bears in Unit 13.

Table 111-3. Number of brown bears harvested in Unit 13, regulatory years 2007–2016.

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E	Unit 13 Total
2007	36	21	4	20	68	149
2008	29	27	11	22	66	155
2009	23	25	12	23	51	134
2010	34	18	2	27	56	138
2011	19	18	5	21	56	120
2012	24	20	12	25	48	129
2013 ¹	28	22	8	54	46	158
2014	10	14	9	24	46	103
2015 ²	20	25	16	37	55	153
2016	29	25	10	32	45	141
Average	25.2	21.5	8.9	28.5	53.7	138.0

¹ First year of spring brown bear take over bait in 13D, 26 brown bears taken over bait.

² First year of spring brown bear take over bait in all of Unit 13, 41 brown bears taken over bait.

Table 111-4. Chronology of brown bear harvest in Unit 13, regulatory years 2012–2016.

	Fall	Spring	Total
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	(bait)		
2012	89	40	129
2013 ¹	102	56 (26)	158
2014	65	38 (13)	103
2015 ²	63	90 (41)	153
2016	74	68 (34)	142

¹ First year of spring brown bear take over bait in 13D, 26 brown bears taken over bait.

² First year of spring brown bear take over bait in all of Unit 13, 41 brown bears taken over bait.

Table 111-5. Number of registered bear baiting stations in Units 13, regulatory years 2007–2016.

	Unit 13A	Unit 13B	Unit 13C	Unit 13D	Unit 13E	Unit 13 Total
2007	9	1	5	74	22	111
2008	18	3	3	58	30	112
2009	20	3	7	83	28	141
2010	14	1	6	62	31	114
2011	22	3	4	95	29	153
2012	11	1	4	107	30	153
2013 ¹	17	1	8	139	25	190
2014	13	2	12	155	33	215
2015 ²	34	14	23	139	47	257
2016	24	25	17	142	44	252
Average	18.2	5.4	8.9	105.4	31.9	169.8

¹ First year of spring brown bear take over bait in 13D, 26 brown bears taken over bait.

² First year of spring brown bear take over bait in all of Unit 13, 41 brown bears taken over bait.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the department has not identified any biological concerns for the brown bear population in Unit 13. However, given the increase in brown bear harvest in the spring of 2013, when brown bear baiting was first authorized in 13D, and the spring of 2015 when brown bear baiting was first authorized in all of Unit 13, it may be advisable to consider how adding additional opportunity to the current hunt structure may impact the Unit 13 brown bear population over time.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 112 – 5 AAC 85.020. Hunting seasons and bag limits for brown bear. Lengthen the hunting season for brown bear in Unit 11.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would extend the brown/grizzly bear season by 15 days to June 30 in Unit 11.

WHAT ARE THE CURRENT REGULATIONS?

- Resident and nonresident hunters can take one brown bear every regulatory year in Unit 11 from August 10–June 15.
- Resident locking tags are not required to hunt brown bears in Unit 11.
- Nonresident hunters must be accompanied by a guide.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would extend the brown bear season in Unit 11 by 15 days from June 15 to June 30, and align the season with Unit 12. Should this proposal be adopted, some additional harvest is likely.

BACKGROUND: No recent brown bear surveys or censuses have been conducted in Unit 11. Frequent observations of bears by department staff and the public suggest a relatively abundant and well-distributed population of brown bears in Unit 11. Between 2012 and 2016, an average of 13 brown bears (62% male) were sealed from Unit 11. The age of bears harvested in Unit 11 has remained stable, as have skull sizes. The bulk of the brown bear harvest in Unit 11 occurs during the fall big game hunting season (Table 112-1).

Table 112-1. Harvest chronology of brown bears in Unit 11 by month, regulatory years 2012–2016.

Year	August	September	October	April	May	June	N
2012	20%	55%	10%	10%	0%	5%	20
2013	27%	60%	13%	0%	0%	0%	15
2014	43%	43%	14%	0%	0%	0%	7
2015	31%	44%	13%	0%	13%	0%	16
2016	0%	71%	14%	0%	0%	14%	7

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because the department has not identified any biological concerns for the brown bear population in Unit 11. The effect of extending the brown bear season in this area is unknown, though harvest is not expected to increase greatly.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 113 – 5 AAC 84.270. Furbearer trapping. Lengthen the wolverine trapping season in Unit 13.

PROPOSED BY: Denali Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would lengthen the trapping season for wolverine in Unit 13 from January 31 to February 28.

WHAT ARE THE CURRENT REGULATIONS?

The current trapping season for wolverine in Unit 13 is from Nov. 10 to Jan. 31 with no bag limit.

The hunting season for wolverine in Unit 13 is September 1–January 31. Trapping seasons in neighboring units are November 1 - the last day in February in Units 20A and 20C; November 1–March 15 in Unit 12; November 10–January 31 in Units 11 and 14B; and December 15–January 31 in Unit 14A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted this proposal would extend the wolverine trapping season in Unit 13 by one month closing on February 28. It would align the wolverine trapping season with red fox, lynx, marten, mink, and weasel, and overlap a portion of the denning period for female wolverines. The susceptibility of both male and female wolverines to harvest during the denning period and the increase in trapping opportunity will likely result in a higher annual harvest of wolverines in Unit 13. The new end date of the trapping season would be out of alignment with Unit 11, and in alignment with Units 20A and 20C.

BACKGROUND: Wolverines are considered common in the more remote mountainous regions of Unit 13, and remain relatively scarce at lower elevations. Between 1987 and 1995, density estimates within favorable wolverine habitat in moderate to high elevation areas of 13A and 13D ranged 4.7–5.2 wolverine/1,000 km². A Sample-Unit Population Estimator (SUPE) survey was conducted in portions of Units 13A and 13E in 2015, finding a higher density of 9.5 wolverines/1,000 km² (range: 8.1–10.8 wolverines/1,000 km²). However, no additional wolverine population data are available.

The Unit 13 wolverine take has averaged 53 per year over the last ten years, and ranged from 37 in 2010 to a high of 85 in 2015. For the past five years the annual harvest has averaged 60 (Table 113-1), up from the previous five-year average of 45 wolverine.

Table 113-1. Unit 13 wolverine harvest and method of take, regulatory years 2012–2016.

Year	Males	Females	Unk.	Total	Trap/snare	% Trap	Shot	% Shot	Unk.
2012	32	21	3	56	47	85	8	15	1
2013	32	21	6	59	52	90	6	10	1
2014	34	15	5	54	51	94	3	6	0
2015	47	30	8	85	56	98	2	2	0
2016	28	18	1	47	47	100	0	0	0

This increase is largely the result of an exceptionally high wolverine harvest in 2015. Males have consistently accounted for the majority of the harvest in Unit 13. The female percentage of the harvest averaged 38% between 2012 and 2016, up from the 35% female harvest during the previous five years. An average of 31 trappers successfully harvested wolverines annually between 2012 and 2016, an increase from the previous five year average of 25. Because the current season is relatively short, the timing of the wolverine harvest generally reflects season dates and trapping conditions more than trapping preference (Table 113-2). Considering that the fox, lynx, coyote, and wolf trapping seasons extend past the wolverine trapping season, a small number of incidentally trapped wolverines are reported semi-annually. It is possible an even

greater number of wolverines are incidentally trapped and never reported, or reported as taken the following trapping season.

Table 113-2. Unit 13 wolverine harvest chronology by month, regulatory years 2012–2016.

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
2012	4	1	2	18	25	6	0	56
2013	3	0	5	23	27	1	0	59
2014	3	0	6	24	20	1	0	54
2015	1	0	4	28	52	0	0	85
2016	0	0	2	9	35	0	1	47

Harvest locations indicate that most wolverines are harvested from the periphery and foothills of the Chugach, Talkeetna, and Alaska mountain ranges. There is good road access into wolverine habitat in limited portions of Unit 13. However, there appears to be large areas of refugia between popular trapping locations.

The denning period for wolverines begins with the birth of kits in February and early March and extends until late May. Trapping during this time may negatively affect wolverine populations. Reproductive females are vulnerable to harvest during the denning period because they travel extensively to obtain food while attempting to meet the energetic demands of lactation. Harvesting reproductive females during denning can negatively affect recruitment. High rates of disturbance during the denning period may also lead to increased mortality of kits.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal but is concerned that lengthening the wolverine trapping season to February 28 will likely increase the harvest and consideration should be given regarding the vulnerability of wolverines during denning. With limited biological data specific to wolverines in Unit 13, conservation issues are still largely unknown. If the board intends to adopt this proposal the department recommends the season end on the last day in February, rather than February 28, due to leap years.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 114 – 5 AAC 84.270. Furbearer trapping. Extend the wolverine trapping season in Unit 13.

PROPOSED BY: John Basile

WHAT WOULD THE PROPOSAL DO? This proposal would lengthen the trapping season for wolverine in Unit 13 from January 31 to February 28.

WHAT ARE THE CURRENT REGULATIONS?

The current trapping season for wolverine in Unit 13 is from Nov. 10 to Jan. 31 with no bag limit.

The hunting season for wolverine in Unit 13 is September 1 – January 31. Trapping seasons in neighboring units are November 1 - the last day in February in Units 20A and 20C; November 1 - March 15 in Unit 12; November 10 – January 31 in Units 11 and 14B; and December 15 - January 31 in Unit 14A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted this proposal would extend the wolverine trapping season in Unit 13 by one month, to close on February 28. It would align the wolverine trapping season with red fox, lynx, marten, mink, and weasel, and overlap a portion of the denning period for female wolverines. The susceptibility of both male and female wolverines to harvest during the denning period and the increase in trapping opportunity will likely result in a higher annual harvest of wolverines in Unit 13. The new end date of the trapping season would be out of alignment with Unit 11, and in alignment with Units 20A and 20C.

BACKGROUND: Wolverines are considered common in the more remote mountainous regions of Unit 13, and remain relatively scarce at lower elevations. Between 1987 and 1995, density estimates within favorable wolverine habitat in moderate to high elevation areas of 13A and 13D ranged 4.7–5.2 wolverine/1,000 km². A Sample-Unit Population Estimator (SUPE) survey was conducted in portions of Units 13A and 13E in 2015, finding a higher density of 9.5 wolverines/1,000 km² (range: 8.1–10.8 wolverines/1,000 km²). However, no additional wolverine population data are available.

The Unit 13 wolverine take has averaged 53 per year over the last ten years, and ranged from 37 in 2010 to a high of 85 in 2015. For the past five years the annual harvest has averaged 60 (Table 114-1), up from the previous five-year average of 45 wolverine.

Table 114-1. Unit 13 wolverine harvest and method of take, regulatory years 2012–2016.

Year	Males	Females	Unk.	Total	Trap/snare	% Trap	Shot	% Shot	Unk.
2012	32	21	3	56	47	85	8	15	1
2013	32	21	6	59	52	90	6	10	1
2014	34	15	5	54	51	94	3	6	0
2015	47	30	8	85	56	98	2	2	0
2016	28	18	1	47	47	100	0	0	0

This increase is largely the result of an exceptionally high wolverine harvest in 2015. Males have consistently accounted for the majority of the harvest in Unit 13. The female percentage of the harvest averaged 38% between 2012 and 2016, up from the 35% female harvest during the previous five years. An average of 31 trappers successfully harvested wolverines annually between 2012 and 2016, an increase from the previous five year average of 25. Because the current season is relatively short, the timing of the wolverine harvest generally reflects season dates and trapping conditions more than trapping preference (Table 114-2). Considering that the fox, lynx, coyote, and wolf trapping seasons extend past the wolverine trapping season, a small number of incidentally trapped wolverines are reported semi-annually. It is possible an even greater number of wolverines are incidentally trapped and never reported, or reported as taken the following trapping season.

Table 114-2. Unit 13 wolverine harvest chronology by month, regulatory years 2012–2016.

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
2012	4	1	2	18	25	6	0	56
2013	3	0	5	23	27	1	0	59
2014	3	0	6	24	20	1	0	54
2015	1	0	4	28	52	0	0	85
2016	0	0	2	9	35	0	1	47

Harvest locations indicate that most wolverines are harvested from the periphery and foothills of the Chugach, Talkeetna, and Alaska mountain ranges. There is good road access into wolverine habitat in limited portions of Unit 13. However, there appears to be large areas of refugia between popular trapping locations.

The denning period for wolverines begins with the birth of kits in February and early March and extends until late May. Trapping during this time may negatively affect wolverine populations. Reproductive females are vulnerable to harvest during the denning period because they travel extensively to obtain food while attempting to meet the energetic demands of lactation. Harvesting reproductive females during denning can negatively affect recruitment. High rates of disturbance during the denning period may also lead to increased mortality of kits.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal but is concerned that lengthening the wolverine trapping season to February 28 will likely increase the harvest and consideration should be given regarding the vulnerability of wolverines during denning. With limited biological data specific to wolverines in Unit 13, conservation issues are still largely unknown. If the board intends to adopt this proposal the department recommends the season end on the last day in February, rather than February 28, due to leap years.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 115 – 5 AAC 84.270. Furbearer trapping. Extend the trapping season for wolverine in Units 11 and 13.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would lengthen the trapping season for wolverine in Units 11 and 13 from January 31 to February 28.

WHAT ARE THE CURRENT REGULATIONS?

The current trapping season for wolverine in Units 11 and 13 is from Nov. 10 to Jan. 31, with no bag limit.

The hunting season for wolverine in Unit 13 is September 1–January 31. Trapping seasons in neighboring units are November 1–the last day in February in Units 20A and 20C; November 1–

March 15 in Unit 12; November 10 – January 31 in Units 11 and 14B; and December 15–January 31 in Unit 14A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED If adopted this proposal would extend the wolverine trapping season in Units 11 and 13 by one month, to close on February 28. It would align the wolverine trapping season with red fox, lynx, marten, mink, and weasel, and overlap a portion of the denning period for female wolverines. The susceptibility of both male and female wolverines to harvest during the denning period and the increase in trapping opportunity will likely result in a higher annual harvest of wolverines in both units. The new end date of the trapping season would be in alignment with Units 20A and 20C.

BACKGROUND: Wolverines are considered common in the more remote mountainous regions of Units 11 and 13, and remain relatively scarce at lower elevations. Between 1987 and 1995, density estimates within favorable wolverine habitat in moderate to high elevation areas of 13A and 13D ranged 4.7–5.2 wolverine/1,000 km² (Gardner and Becker 1991, Golden 1996). A Sample-Unit Population Estimator (SUPE) survey was conducted in portions of Units 13A and 13E in 2015 (Colson 2015), finding a higher density of 9.48 wolverines/1,000 km² (95 percent confidence interval 8.1–10.8 wolverines/1,000 km²). However, no additional wolverine population data are available for Units 11 or 13.

The wolverine harvest in Unit 11 has averaged 11 per year over the last ten years and ranged from four in 2014 to a high of 21 in 2007. The annual harvest in Unit 11 averaged nine between 2012 and 2016 (Table 115-1) – down from an average of 13 the previous five years.

Table 115-1. Unit 11 wolverine harvest and method of take, regulatory years 2012–2016.

Year	Males	Females	Unk.	Total	Trap/snare	% Trap	Shot	% Shot	Unk.
2012	3	2	0	5	5	100	0	0	0
2013	5	4	2	11	11	100	0	0	0
2014	2	1	1	4	4	100	0	0	0
2015	10	6	0	16	16	100	0	0	0
2016	7	2	0	9	9	100	0	0	0

The female percentage of the harvest averaged 36% between 2012 and 2016, slightly higher than the previous five years (34%). The number of successful wolverine trappers in Unit 11 averaged five between 2012 and 2016 which is down from an average of seven trappers in the previous five years. In 2008 the federal subsistence trapping season in Unit 11 lengthened from January 31 to February 28, with no increase in the number of wolverine harvested. Very few wolverines are ground shot in Unit 11 (averaging ≤ 1 annually).

The Unit 13 harvest is greater than Unit 11, largely due to Unit's proximity to large population centers, and avenues of access via the Glenn, Richardson, and Denali highways. The Unit 13 wolverine take has averaged 53 per year over the last ten years, and ranged from 37 in 2010 to a high of 85 in 2015. For the past five years the annual harvest has averaged 60 (Table 115-2), up from the previous 5-year average of 45 wolverine.

Table 115-2. Unit 13 wolverine harvest and method of take, regulatory years 2012–2016.

Year	Males	Females	Unk.	Total	Trap/snare	% Trap	Shot	% Shot	Unk.
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2012	32	21	3	56	47	85	8	15	1
2013	32	21	6	59	52	90	6	10	1
2014	34	15	5	54	51	94	3	6	0
2015	47	30	8	85	56	98	2	2	0
2016	28	18	1	47	47	100	0	0	0

This increase is largely the result of an exceptionally high wolverine harvest in 2015. Males have consistently accounted for the majority of the harvest in Unit 13. The female percentage of the harvest averaged 38% between 2012 and 2016, up from the 35% female harvest during the previous five years. An average of 31 trappers successfully harvested wolverines annually between 2012 and 2016, an increase from the previous five year average of 25. An average of five wolverines were ground shot on all lands (state and federal) between 2011 and 2015 in Unit 13.

Because the current seasons are relatively short, the timing of the wolverine harvest generally reflects season dates and trapping conditions more than trapping preference (Tables 115-3 and 115-4). Considering that the fox, lynx, coyote, and wolf trapping seasons extend past the wolverine trapping season, a small number of incidentally trapped wolverines are reported semi-annually. It is possible an even greater number of wolverine are incidentally trapped and never reported, or reported as taken the following trapping season.

Table 115-3. Unit 11 wolverine harvest chronology by month, regulatory years 2012–2016.

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
2012	0	0	0	1	1	3	0	5
2013	0	0	2	5	4	0	0	11
2014	0	0	0	2	2	0	0	4
2015	0	0	0	0	6	10	0	16
2016	0	0	0	3	3	3	0	9

Table 115-4. Unit 13 wolverine harvest chronology by month, regulatory years 2012–2016.

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
2012	4	1	2	18	25	6	0	56
2013	3	0	5	23	27	1	0	59
2014	3	0	6	24	20	1	0	54
2015	1	0	4	28	52	0	0	85
2016	0	0	2	9	35	0	1	47

Harvest locations indicate that most wolverines are harvested from the periphery and foothills of the Chugach, Talkeetna, and Alaska mountain ranges. There is good road access into wolverine habitat in limited portions of Unit 13. However, there appears to be large areas of refugia between popular trapping locations in both units.

The denning period for wolverines begins with the birth of kits in February and early March and extends until late May. Trapping during this time may negatively affect wolverine populations. Reproductive females are vulnerable to harvest during the denning period because they travel extensively to obtain food while attempting to meet the energetic demands of lactation. Harvesting reproductive females during denning can negatively affect recruitment. High rates of disturbance during the denning period may also lead to increased mortality of kits.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal but is concerned that lengthening the wolverine trapping season to February 28 will likely increase the harvest and consideration should be given regarding the vulnerability of wolverines during denning. With limited biological data specific to wolverines in Units 11 and 13, conservation issues are still largely unknown. If the board intends to adopt this proposal the department recommends the season end on the last day in February, rather than February 28, due to leap years.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 116 – 5 AAC 92.095. Unlawful methods of taking furbearers; exceptions.

Allow the incidental take of up to two furbearers per year during an open season for other furbearers.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? This proposal would either:

Allow the annual incidental catch of two furbearers for which there is a “no limit” bag limit, per licensed trapper, in traps set for species for which the season is still open in Units 11 and 13.

Or

Require the department to issue two incidental take tags annually, per licensed trapper, for furbearers that have a “no limit” bag limit that are caught in traps set for a species for which the season is still open in Units 11 and 13. Trappers must report incidental catches within 30 days for tagging and sealing (if required).

WHAT ARE THE CURRENT REGULATIONS?

The regulations regarding trapping can be found in 5 AAC 92.095 and in the current trapping summary booklet. The current seasons and bag limits in Units 11 and 13 are:

- Coyote: Units 11 and 13, November 10 to April 30, no limit.
- Lynx: Units 11 and 13, November 10 to February 28, no limit.
- Red fox: Units 11 and 13, November 10 to February 28, no limit.
- Wolf: Unit 11, November 10 to March 31, no limit.
- Wolf: Unit 13, November 10 to April 30, no limit.

- Wolverine: Units 11 and 13, November 10 to January 31, no limit.

If a non-target furbearer is caught during the closed season for that species, it is the property of the state and must be transported immediately to the nearest ADF&G or Alaska Wildlife Troopers office and surrendered.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow licensed trappers to legally keep furbearer and other species incidentally caught during the closed season even if there is no season or bag limit for the species that was incidentally caught. This would also allow licensed trappers to target “incidental” species such as wolverine, lynx, wolf, and likely others during closed seasons for those species due to the value and opportunity provided by allowing trappers to retain incidental furbearer catch.

BACKGROUND: There has been interest from trappers in the past to allow for the possession of incidentally-caught furbearers due to the time and effort involved in handling and processing non-target catch. Understandably, the current regulations require trappers to turn over non-target furbearers to the state because they are the property of the state if taken during the closed season for these species. These surrendered non-target catches are processed and sold at the department’s fur auctions every winter in Anchorage or Fairbanks.

The board deliberated this proposal on a statewide basis in November 2017 and did not adopt it.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because it allocates the take from open, established seasons to closed seasons. If the board adopts this proposal, the department will collect information on the incidental take when the hides are sealed.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 117 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Reduce the harvest and possession limits for grouse in Unit 11.

PROPOSED BY: Wrangell-St. Elias National Park Subsistence Resource Commission

WHAT WOULD THE PROPOSAL DO? If adopted, this proposal would decrease the Unit 11 grouse daily bag limit from fifteen to five, of which no more than two may be ruffed grouse. The grouse possession limit would decrease from thirty to ten, of which no more than four may be ruffed grouse.

WHAT ARE THE CURRENT REGULATIONS? The grouse hunting season in Unit 11 is open from 10 August to 31 March. The daily bag limit is 15 grouse per day, and 30 in possession. There is a positive customary and traditional use finding for grouse in Unit 11; the board has not yet made a finding as to amounts reasonably necessary for subsistence.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? By reducing the daily bag limit for sharp-tail, spruce and ruffed grouse from 15 to five (only two may be

ruffed) per day, and the daily possession limit from thirty to ten (only four may be ruffed), there would be reduced harvest opportunity for all grouse hunters in Unit 11 likely resulting in a reduction in harvest.

BACKGROUND: The department does not regularly collect data on harvest or breeding abundance for ruffed, sharp-tailed, or spruce grouse for Unit 11. Harvest surveys done by the Division of Subsistence with households in Glennallen in 1982, 1987 and 2013 indicate that on average, 17%-20% of households hunt grouse, 15%-20% use grouse, and that an estimated 70 grouse are harvested annually. In 2013, 2.5% of Glennallen households hunted for ruffed grouse, and the harvest for that year was an estimated harvest of 3 ruffed grouse. Breeding abundance data for ruffed and sharp-tailed grouse in Units 12 and 20 suggest those two species are currently at high abundance in those areas. The department has not developed a method of assessing breeding or brood abundance for spruce grouse.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no biological issues relative to grouse abundance in Unit 11. If adopted, the record should show that the board has determined if the new regulations continue to provide a reasonable opportunity for success in harvesting grouse for customary and traditional uses Unit 11.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 118 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Reduce the bag limit and shorten the season for grouse in Unit 11.

PROPOSED BY: Howard Mozen and George Vue Yang

WHAT WOULD THE PROPOSAL DO? If adopted, this proposal would decrease the Unit 11 grouse daily bag limit from fifteen to five, and the possession limit from thirty to ten. This proposal would also change opening day for grouse from August 10 to September 1, shortening the grouse season by twenty two days.

WHAT ARE THE CURRENT REGULATIONS? The grouse hunting season in Unit 11 is open from August 10 to March 31. The daily bag limit is 15 grouse per day, and 30 in possession. There is a positive customary and traditional use finding for grouse in Unit 11; the board has not yet made a finding of amounts reasonably necessary for subsistence.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? By reducing the daily bag limit for ruffed, sharp-tail, and spruce grouse from 15 to five and shortening the season by 22 days there would be a reduction in harvest opportunity for all grouse hunters in Unit 11, likely resulting in a reduction in harvest.

BACKGROUND: The department does not regularly collect data on harvest or breeding abundance for ruffed, sharp-tailed, or spruce grouse for Unit 11. Harvest surveys done by the Division of Subsistence with households in Glennallen in 1982, 1987 and 2013 indicate that on average, 17%–20% of households hunt grouse, 15%–20% use grouse, and that an estimated 70 grouse are harvested annually. In 2013, 2.5% of Glennallen households hunted for ruffed grouse,

and the harvest for that year was an estimated harvest of 3 ruffed grouse. Breeding abundance data for ruffed and sharp-tailed grouse in Units 12, 14, and 20 suggest those two species are currently at high abundance in those areas. The department has not developed a method of assessing breeding or brood abundance for spruce grouse. Based on harvest composition data, grouse harvest drops off considerably statewide after the end of November through the remainder of the season. Thereby shortening the season from 31 March to 15 December may not have any meaningful biological impact.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no biological issues relative to grouse abundance in Unit 11. If adopted, the record should show that the board has determined if the new regulations continue to provide a reasonable opportunity for success in harvesting grouse for customary and traditional uses Unit 11.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 119 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Lengthen the hunting season for ptarmigan in Unit 13B.

PROPOSED BY: Copper Basin Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? If adopted the proposal would align the Unit 13B ptarmigan season with the remainder of Unit 13. The Unit 13B ptarmigan season would increase by four months, extending the season closure date from November 30 to March 31.

WHAT ARE THE CURRENT REGULATIONS? Ptarmigan hunting season in Unit 13B is open from August 10 to November 30, and the remainder of Unit 13 is open from August 10 to March 31. The daily bag limit in all of Unit 13 is 10 ptarmigan per day, and 20 in possession.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Hunting opportunity would increase for Unit 13B willow, rock, and white-tailed ptarmigan populations. Based on harvest composition data (RY11–16), Unit 13 (except Unit 13B) ptarmigan harvest is largely bimodal with the largest harvest occurring between mid-February and March 31 due to increased access by snowmobile. Based on harvest composition data, 40% of the annual harvest in all of Unit 13 occurs from August through November. Approximately 60% occurs from February through March (predominantly from Units 13E and 13A; Unit 13B is closed during this period). This differs from the statewide average of 60% between August and October and 34% between February and March. Less than 1% occurs from December through January likely due to the low temperatures, darkness, and poor snow conditions.

Through a recent study on rock ptarmigan in Unit 13B the department documented higher risk of mortality through the fall (August 10–November) in proximity to roadways. However, the study documented lower risk of mortality through the winter months (December–March) in Unit 13B. There was likely very limited federal subsistence hunting pressure on rock ptarmigan throughout the study area during this time period based on hunt areas and telemetered ptarmigan locations. Therefore, it would be expected rock ptarmigan in Unit 13B that survive the fall have a higher

likelihood of contributing to the Unit 13B spring breeding population (April–May) with the November 30 season closure.

BACKGROUND: The current November 30 season closure began in the fall of 2009 based on concern for low rock ptarmigan abundance from spring breeding surveys throughout Unit 13B. During the Central/Southwest Board of Game meeting in February 2013, Proposal 88 sought to adjust the season closure date from November 30 to March 31. However, the proposal failed and the department completed a study of rock ptarmigan movement, mortality, and nesting behavior between May 2013 and May 2017.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no biological or conservation issue relative to rock and willow ptarmigan abundance in Unit13B or all of Unit 13.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 120 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Align the hunting seasons and reduce the bag limit for ptarmigan in Units 13E and 13B.

PROPOSED BY: Denali Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? If adopted the proposal would align the ptarmigan hunting season and reduce the daily bag limit in Units 13B and 13E. The season dates for both units would change to August 10–January 31, increasing the season by two months in Unit 13B, and decreasing the season by two months in Unit 13E. The daily bag limit for both units would decrease from 10 ptarmigan per day to five, with the possession limit decreasing from 20 to 10.

WHAT ARE THE CURRENT REGULATIONS? Ptarmigan hunting season in Unit 13B is open from August 10 to November 30, and in Unit 13E is open from August 10 to March 31. The daily bag limit is 10 ptarmigan per day, and 20 in possession in both units.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Hunting opportunity would increase on Unit13B willow, rock, and white-tailed ptarmigan populations and be reduced on Unit 13E ptarmigan populations. Based on harvest composition data (RY11–16), Unit 13 (except Unit 13B) ptarmigan harvest is largely bimodal with the largest harvest occurring between mid-February and March 31 due to increased access by snowmobile. Based on harvest composition data, 40% of the annual harvest in all of Unit 13 occurs from August through November. Approximately 60% occurs from February through March (predominantly from Units 13E and 13A; Unit 13B is closed during this period). This differs from the statewide average of 60% between August and October and 34% between February and March. Less than 1% of the harvest occurs from December through January likely due to the low temperatures, darkness, and poor snow conditions.

Through a recent study on rock ptarmigan in Unit 13B the department documented higher risk of mortality through the fall (August 10–November) in close proximity to roadways. However, the study documented lower risk of mortality through the winter months (December–March) in Unit

13B. There was likely very limited federal subsistence hunting pressure on rock ptarmigan throughout the study area during this time period based on hunt areas and telemetered ptarmigan locations. Therefore, it would be expected rock ptarmigan in Unit 13B that survive the fall have a higher likelihood of contributing to the Unit 13B spring breeding population (April–May) with the November 30 season closure.

BACKGROUND: The current November 30 season closure in Unit 13B began in the fall of 2009 based on concern for low rock ptarmigan abundance from spring breeding surveys throughout Unit 13B. During the Central/Southwest Board of Game meeting in February 2013, proposal 88 sought to adjust the season closure date from November 30 to March 31. However, the proposal failed and the department completed a study of rock ptarmigan movement, mortality, and nesting behavior between May 2013 and May 2017.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no biological or conservation issues relative to rock and willow ptarmigan abundance in Unit 13 and specifically 13B. If adopted, the record should show that the board has determined if the new regulations continue to provide a reasonable opportunity for success in harvesting ptarmigan for customary and traditional in Unit 13, which has a positive customary and traditional use finding.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 121 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Lengthen the hunting season for ptarmigan in Unit 13B.

PROPOSED BY: Rebecca Schwanke

WHAT WOULD THE PROPOSAL DO? This proposal would align the hunting season for ptarmigan in Units 13B with the remainder of Unit 13. The Unit 13B ptarmigan season would increase by four months, extending the end of the season from November 30 to March 31.

WHAT ARE THE CURRENT REGULATIONS? Ptarmigan hunting season in Unit 13B is open from August 10 to November 30, and the remainder of Unit 13 is open from August 10 to March 31. The daily bag limit in all of Unit 13 is 10 ptarmigan per day, and 20 in possession.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Hunting opportunity would increase on Unit 13B willow, rock, and white-tailed ptarmigan populations. Based on harvest composition data (RY11–16), Unit 13 (except Unit 13B) ptarmigan harvest is largely bimodal with the largest harvest occurring between mid-February and March 31 due to increased access by snowmobile. Based on harvest composition data, 40% of the annual harvest in all of Unit 13 occurs from August through November. Approximately 60% occurs from February through March (predominantly from Units 13E and 13A; Unit 13B is closed during this period). This differs from the statewide average of 60% between August and October and 34% between February and March. Less than 1% of the harvest occurs from December through January likely due to the low temperatures, darkness, and poor snow conditions.

Through a recent study on rock ptarmigan in Unit 13B the department documented a higher risk of mortality through the fall (August 10–November) in proximity to roadways. However, the study documented lower risk of mortality through the winter months (December–March) in Unit 13B. There was likely very limited federal subsistence hunting pressure on rock ptarmigan throughout the study area during this time period based on hunt areas and telemetered ptarmigan locations. Therefore, it would be expected rock ptarmigan in Unit 13B that survive the fall have a higher likelihood of contributing to the Unit 13B spring breeding population (April–May) with the November 30 season closure.

BACKGROUND: The current November 30 season closure began in the fall of 2009 based on concern for low rock ptarmigan abundance from spring breeding surveys throughout Unit 13B. During the Central/Southwest Board of Game meeting in February 2013, Proposal 88 sought to adjust the season closure date from November 30 to March 31. However, the proposal failed and the department completed a study of rock ptarmigan movement, mortality, and nesting behavior between May 2013 and May 2017.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. There are no biological or conservation issues relative to rock and willow ptarmigan abundance in Unit 13 and specifically 13B.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the public or to the department.

PROPOSAL 122 – 5 AAC 92.540. Controlled Use Areas. Modify the Sourdough Controlled Use Area.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal would allow motorized access and transportation of game on the Gulkana River, Sourdough Creek Campground, and adjacent boat launch.

WHAT ARE THE CURRENT REGULATIONS?

5 AAC 92.540(3)

(B) Sourdough Controlled Use Area:

(i) the area consists of that portion of Unit 13B bounded by a line beginning at the confluence of Sourdough Creek and the Gulkana River, then northerly along Sourdough Creek to approximately mile 148 of the Richardson Highway, the northerly along Sourdough Creek to approximately mile 148 of the Richardson Highway, then northerly along the Richardson Highway to the Middle Fork Trail at approximately mile 170 of the Richardson Highway, then westerly along the trail to the Gulkana River, then southerly along the east bank of the Gulkana River to its confluence with Sourdough Creek, the point of beginning;

(ii) the area is closed to the use of any motorized vehicle for hunting, including the transportation of hunters, their hunting gear, or parts of game; however, this provision does not prohibit motorized access ,

or transportation of game, on the Richardson Highway, Sourdough and Haggard Creeks, Middle Fork, and Haggard Creek trails, or other trails designated by the department.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal will clarify the legality of motorized use for access to and on the Gulkana River, Sourdough Campground, and adjacent public boat launch. Currently hunters are prohibited from driving motorized vehicles into the Sourdough Campground for the purpose of camping, or to ferry and launch boats on the Gulkana River from the campground boat launch.

BACKGROUND: The Sourdough Controlled Use Area (Figure 122-1) was created in 1971 to provide moose and caribou hunting opportunities for individuals without off-road vehicles (ORVs). As competition increased for moose and caribou in the late 1960s, it became evident that there was a substantial demand for areas to hunt without having to compete with ORVs. The Sourdough Controlled Use Area provides a large hunting area accessible from the Richardson Highway where moose and caribou can be found in fair numbers and roadside or non-motorized hunters have reasonable chance for success. The Sourdough Controlled Use Area was not intended to restrict hunter access to or on the Gulkana River. Because the Sourdough Creek Campground and boat launch are situated within the confines of the Sourdough Controlled Use Area, a non-motorized area, hunters are restricted from using the campground and utilizing the campground boat launch to access the Gulkana River.

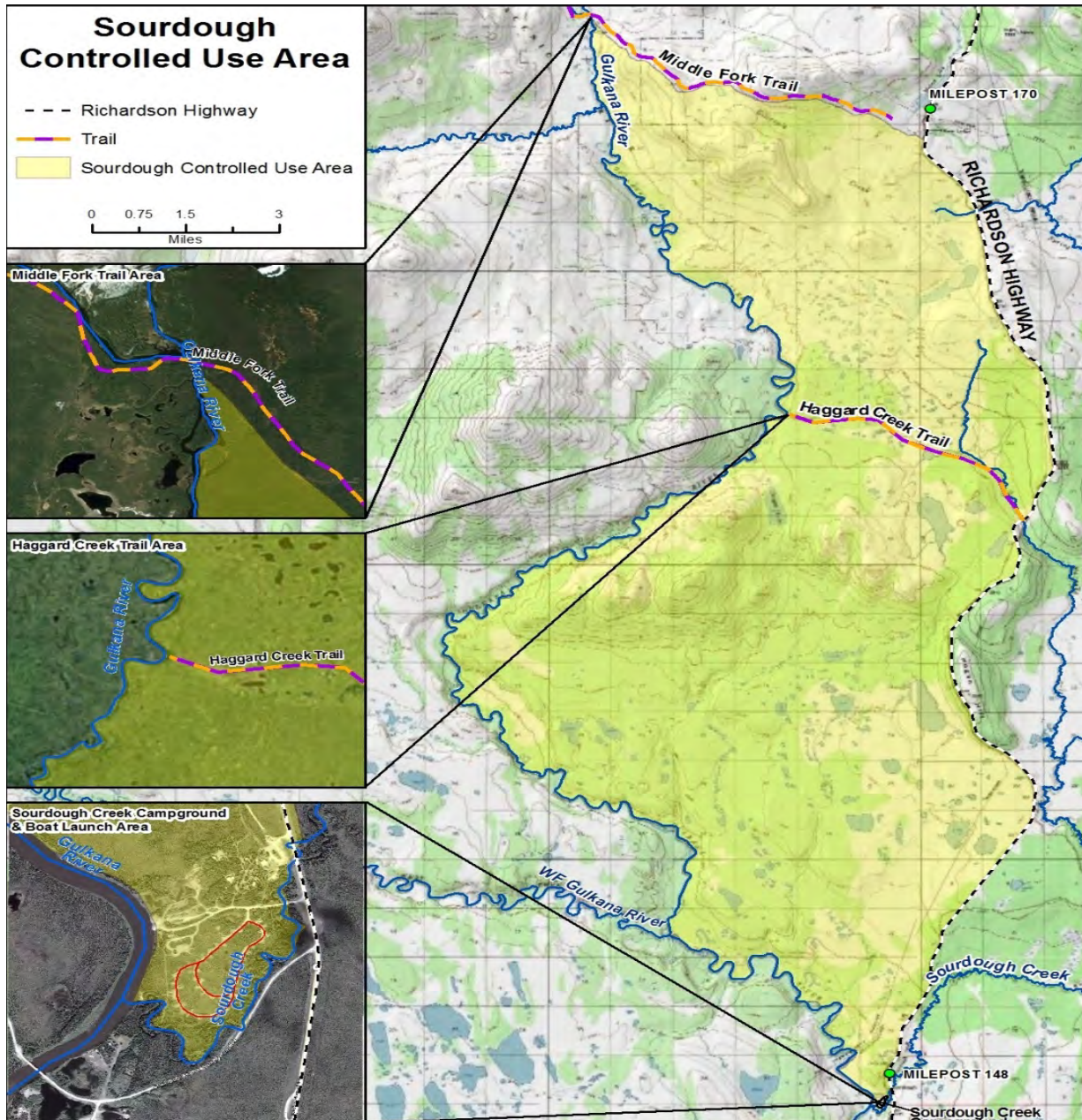


Figure 122-1. Sourdough Controlled Use Area in Unit 13B and the three areas identified in Proposal 122.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Clarifying the legality of motorized use for access to and on the Gulkana River, Sourdough Campground, and adjacent public boat launch further refines the description and should help alleviate confusion by the public.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 123 – 5 AAC 92.540. Controlled Use Areas. Modify the Clearwater Creek Controlled Use Area.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? If adopted the proposal would add the Maclaren Summit Trail, including trailhead, to the Clearwater Creek Controlled Use Area description.

WHAT ARE THE CURRENT REGULATIONS?

5 AAC 92.540(3)

(C) the Clearwater Creek Controlled Use Area:

(i) the area consists of that portion of Unit 13(B) north of the Denali Highway, west of and including the Maclaren River drainage, east of and including the eastern bank drainages of the Middle Fork and Susitna River downstream from and including the Susitna Glacier, and the eastern bank drainages of the Susitna River downstream from its confluence with the Middle Fork;

(ii) the area is closed to the use of any motorized vehicle for hunting, including the transportation of hunters, their hunting gear, or parts of game, except for brown/grizzly bears, wolves, and small game from March 15 through June 30; however, this provision does not prohibit motorized access, or transportation of game, on the Denali Highway and adjacent highway vehicle areas

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Adding the Maclaren Summit Trail to the Clearwater Creek Controlled Use area description further refines the description of the controlled use area, and should help alleviate public confusion. If adopted the proposal would prohibit the use of motorized vehicles for hunting, including the transportation of hunters, their hunting gear, or parts of game on the Maclaren Summit Trail between July 1 and March 14.

BACKGROUND: The Clearwater Creek Controlled Use Area (Figure 123-1) was created in 1971 to protect moose and caribou from overharvest, and is closed to the use of any motorized vehicle for hunting, including the transportation of hunters, their hunting gear, or parts of game, except for brown/grizzly bears, wolves, and small game from March 15 through June 30. The area provides a large hunting space that is accessible from the Denali Highway, where moose and caribou can be found in fair numbers, and roadside or non-motorized hunters have a reasonable chance for success. However, there has been some public confusion and enforcement issues regarding the positioning of the Maclaren Summit Trail relative to the eastern boundary of the Clearwater Creek Controlled Use Area. Recent GIS analysis conducted by the Alaska Department of Natural Resources and the Alaska Department of Fish and Game have identified that the trailhead and most of the Maclaren Summit Trail lies within the Maclaren River drainage, and the controlled use area.

WHAT WOULD THE PROPOSAL DO? This proposal would eliminate all Unit 13-specific proxy regulations for moose and caribou.

WHAT ARE THE CURRENT REGULATIONS?

5 AAC 92.011

...

(d) A person may not proxy

- (1) for more than one beneficiary at a time;
- (2) more than once per season per species in Unit 13;
- (3) for Tier II Caribou in Unit 13, unless the proxy is a Tier II permittee;

...

(k) Proxy hunting under this section is only allowed for

...

- (3) moose in Tier II hunts, any-bull hunts, and antlerless moose hunts.

...

Under 5 AAC 92.072, any member of a Community Subsistence Harvest (CSH) community or group may hunt on behalf of another member as a designated hunter. Similar to proxy hunting, all designated hunters must carry a signed harvest ticket of any beneficiary they are hunting for, along with their own harvest ticket; however, proxy hunters must also carry the signed proxy form and the beneficiary's hunting license.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted, Unit 13 hunters could proxy hunt for moose and caribou for more than one beneficiary and more than once per species per season. While there is currently no Tier II caribou hunt in Unit 13, future hunters would not be required to hold a Tier II caribou permit in order to proxy for another Tier II permittee. It is likely that the number of proxy hunters would increase should this proposal be adopted. Hunters would still not be able to proxy hunt for moose under antler-restricted hunts, such as in the general moose season.

BACKGROUND: In 2006 proxy regulations were changed in Unit 13 in an attempt to deter misuse of the proxy regulation. Between 2001 and 2005, prior to the regulation change, the percentage of proxy applications received relative to permits issued ranged from 10.7% to 27.3% for the Tier II moose hunt (Table 124-1), and 7.9% and 19.0% for the Tier II caribou hunt (Table 124-2).

Table 124-1. Tier II moose hunt (TM300) proxy applications and hunt statistics, RY2001–2005.

Year	# Proxy App.	Hunted	Harvested	Permits Issued	% Proxies Issued
2001	16	12	4	150	10.7%

2002	23	22	8	150	15.3%
2003	41	38	26	150	27.3%
2004	28	24	11	150	18.7%
2005	32	26	9	150	21.3%

Table 124-2. Tier II caribou hunt (TC566) proxy applications, hunt statistics, RY 2001–2005.

Year	# Proxy App.	Hunted	Harvested	Permits Issued	% Proxies Issued
2001	158	140	102	1,996	7.9%
2002	364	327	212	2,003	18.2%
2003	292	240	167	2,005	14.6%
2004	356	293	191	1,869	19.0%
2005	598	530	405	4,001	14.9%

The percentage of proxy applications relative to permits issued has declined since the regulation change (Table 124-3). Of the Tier I caribou permits issued between 2012 and 2016, the percentage of proxy applications received ranged from 4.7% to 7.6%. During the same period the percentage of proxy applications for the drawing caribou hunt ranged from 1.8% to 4.5%.

Table 124-3. Tier I caribou registration hunt (RC566) proxy applications and hunt statistics, RY2012–2016.

Year	# Proxy App.	Hunted	Harvested	Permits Issued	% Proxies Issued
2012	285	237	164	5,045	5.6%
2013	321	225	91	6,878	4.7%
2014	406	328	232	5,595	7.3%
2015	512	254	200	7,235	7.1%
2016	642	--	--	8,470	7.6%

Table 124-4. Drawing caribou hunt (DC480–483, DC485) proxy applications and hunt statistics, RY2012–2016.

Year	# Proxy App.	Hunted	Harvested	Permits Issued	% Proxies Issued
2012	115	91	55	3,001	3.8%
2013	99	51	24	5,000	2.0%
2014	39	25	17	1,000	3.9%
2015	43	13	8	1,001	4.3%
2016 ¹	226	--	--	5,000	4.5%

¹ In 2016 drawing caribou hunts DC480–483 were combined into a single hunt (DC485).

Between 2011 and 2016, an average of 27% of moose harvested in the Community Subsistence Harvest hunt were harvested by designated hunters.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative intent of this proposal. If this proposal is adopted it is expected that there will be an increase in the number animals harvested through proxy hunting.

COST ANALYSIS: There would be no cost to the public and no significant costs to the department.

PROPOSAL 125 – AAC 85.025. Hunting seasons and bag limits for caribou. Change the hunting season dates for the Tier II caribou hunt for the Northern Alaska Peninsula caribou herd (NAP) in Unit 9.

PROPOSED BY: Brian Cato

WHAT WOULD THE PROPOSAL DO? Change the fall hunting season dates for the TC505 caribou hunt in Units 9C and 9E to allow for a September 1–October 10 season for all Tier II permit holders including those from Ugashik Village and Pilot Point.

WHAT ARE THE CURRENT REGULATIONS?

Due to the harvestable surplus, the hunt is currently managed by Tier II permit, with a bag limit of one caribou, with the following seasons:

- Fall season dates are August 10–September 20 in Units 9C and 9E;
- Winter season dates are November 15–February 28 for Unit 9C, and November 1–April 30 for Unit 9E.

The entire regulatory framework is:

5 AAC 85.025(a)(3)

...

Remainder of Unit
9(C)

RESIDENT HUNTERS:

1 caribou by Tier II permit only; provided that the harvestable surplus, in combination with Unit 9(E), is 1,200 caribou or less, up to 1,500 permits may be issued

Aug. 10 - Sept. 20
(Subsistence hunt only)
Nov. 15 - Feb. 28
(Subsistence hunt only)

1 bull by registration permit only; provided that the harvestable surplus, in combination with Unit 9(E), is greater than 1,200 caribou, but less than 1,901 caribou

Aug. 10 - Sept. 20
(Subsistence hunt only)
Nov. 15 - Feb. 28
(Subsistence hunt only)

ALL HUNTERS:

1 bull; provided that the harvestable surplus, in combination with Unit 9(E), is greater than 1,900 caribou

Aug. 10 - Sept. 20
Nov. 15 - Feb. 28

Aug. 10 - Sept. 20
Nov. 15 - Feb. 28

Unit 9(E)

RESIDENT HUNTERS:

1 caribou by Tier II permit only; provided that the harvestable surplus, in combination with Unit 9(C) is 1,200 caribou or less, up to 1,500 permits may be issued.

Aug. 10 - Sept. 20
(Subsistence hunt only)
Nov. 1 - Apr. 30
Subsistence hunt only)

1 bull by registration permit only; provided that the harvestable surplus, in combination with Unit 9(C), is greater than 1,200 caribou, but less than 1901 caribou

Aug. 10 - Sept. 20
(Subsistence hunt only)
Nov. 1 - Apr. 30
(Subsistence hunt only)

ALL HUNTERS:

1 bull; provided that the harvestable surplus, in combination with Unit 9(C), is greater than 1,900 caribou

Aug. 10 - Sept. 10
Nov. 1 - Apr. 30

Aug. 10 - Sept. 20
Nov. 1 - Apr. 30

There is a positive customary and traditional use finding for the Northern Alaska Peninsula Herd in Units 9C and 9E, and an amount necessary for subsistence of 1,200–1,900.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The proposal would shift the TC505 fall hunting season 20 days later (opening September 1 and closing October 10), to allow for later arriving caribou on the Bering Sea coast. The effect would mean a reduction in early season opportunity and harvest (August) and add additional harvest opportunity as the animals get close to the rut. This proposed change will likely increase the amount of time hunters could spend in the field. It may also allow the hunt to be open when caribou are moving and may provide additional opportunity if the caribou come close to villages. The proposal requests this change be in effect for permit holders in Ugashik Village and Pilot Point; however, the change would have to apply to all permit holders, not just those that reside in Ugashik Village and Pilot Point. The number of permits can be limited to ensure there are no negative biological consequences.

BACKGROUND: The Northern Alaska Peninsula caribou herd (NAP) continues to recover from historical lows during the mid-2000s to a current estimate of 3,600 animals. The department opened a Tier II drawing hunt (TC505) in 2016 to allow subsistence hunters an opportunity to hunt caribou for the first time in a decade.

TC505 harvest, Northern Alaska Peninsula Caribou Herd, Units 9C and 9E

Year*	Total Permits	Reports	Male killed	Female killed	Total killed	Fall harvest	Hunted	Did not hunt
2016	200	182	74	8	82	32	125	57
2017	200	24	13	3	16	16	18	6

*Closed by EO September 30, 2016 and October 10, 2017

Caribou have tended to remain inaccessible to Bering Sea coastal villages until after the current fall season has closed, if they show up at all. The department has issued emergency orders (EO) to extend the fall season for a portion of Unit 9C and all of Unit 9E during the last two years to benefit coast villages, but because of the difficulty in accessing the herd harvest has remained low. Only 82 caribou were reported harvested in 2016, and 16 thus far in RY2017, with the fall season extended by EO. The population can currently sustain a harvest up to an estimated surplus of 150 including bulls, and cow harvest (approximately 4% of population).

The department intends to increase the number of permits available as herd size and harvestable surplus increases; current regulations allow the hunt to move into registration and harvest ticket hunts as (appropriate relative to the amount necessary for subsistence) to manage the herd and provide hunting opportunity.

DEPARTMENT COMMENTS: The department is **NEUTRAL** regarding the proposal to include all of Units 9C and 9E, with season dates of August 10–October 10.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 126 – 5 AAC 85.025. Hunting seasons and bag limits for caribou. Increase the bag limit for the Southern Alaska Peninsula caribou herd (SAP) in Unit 9D.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? Adaptively increase the general season bag limit for the Southern Alaska Peninsula caribou herd (SAP) in Unit 9D in a stepwise progression as the population increases. This proposal will increase the bag limit to maintain the population at or near 4,000 caribou as follows:

- 1) If the harvestable portion is greater than 150 **and less than 249**: 2 caribou.
- 2) If the harvestable portion is greater than 250 **and less than 449**: 3 caribou.
- 3) If the harvestable portion is greater than 450 **and less than 549**: 4 caribou.
- 4) If the harvestable portion is greater than 550: 5 caribou.

These bag limits would apply to resident and nonresidents hunters unit-wide.

WHAT ARE THE CURRENT REGULATIONS?

Due to the harvestable surplus, the hunt is currently administered by general season harvest ticket, with a bag limit of one caribou, with the following season dates:

- Residents: August 1–September 30 and November 15–March 31;
- Nonresidents: August 1–September 30.

The entire regulatory framework is:

5 AAC 85.025(a)(4)

Unit 9(D)	Resident Open Season	Nonresident Open Season
If the harvestable portion is 99 caribou or less: RESIDENT HUNTERS: 1 caribou by Tier II subsistence hunting permit only;	Aug. 1 - Sept. 30 (Subsistence hunt only) Nov. 15 - Mar. 31 (Subsistence hunt only)	
NONRESIDENT HUNTERS: If the harvestable portion is greater than 99, but less than 151 caribou: RESIDENT HUNTERS: 1 caribou by registration permit only	Aug. 1 - Sept. 30 (Subsistence hunt only) Nov. 15 - Mar. 31 (Subsistence hunt only)	No open season.
NONRESIDENT HUNTERS If the harvestable portion is greater than 150 caribou: RESIDENT HUNTERS: 1 caribou	Aug. 1 - Sept. 30 Nov. 15 - Mar. 31	No open season.
NONRESIDENT HUNTERS 1 caribou		Aug. 1 - Sept. 30

There is a positive customary and traditional use finding for the Southern Alaska Peninsula Herd in Unit 9D and an amount necessary for subsistence of 100–150 caribou.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Allow the department the regulatory discretion to proactively and adaptively manage the rapidly growing caribou population by increasing harvest through individual bag limits commensurate with population levels, without proposing regulatory changes out of the Board of Game cycle.

BACKGROUND: Hunting was restricted on the SAP during the early to mid-2000s and closed completely by 2008 because the caribou population was declining. The SAP has been on the increase since a wolf removal program in RY2007–08, and has now likely exceeded 2,200 caribou with high bull and calf ratios (49 and 38 per 100 cows, respectively). The population can currently sustain a harvest up to an estimated surplus of 220 including bull and cow harvest (approximately 9% of population) with continued population growth and high bull:cow ratio (30–40 per 100 cows). Current regulations limit hunters to a one caribou bag limit beyond a harvestable surplus of 150 caribou, which was adequate to begin rebuilding the population but does not go far enough as the population rebounds.

In Unit 9D from 2012 through 2016, there was a federal subsistence hunt on the SAP managed by Izembek National Wildlife Refuge. Through the years this hunt varied from 11 to 35 permits issued, and one to 10 caribou harvested. In 2013 the Board adopted a regulatory framework that allowed the department to manage the hunt depending on the harvestable portion of the herd. A Tier II hunt was held, TC506, and in 2016 the department opened a general season hunt with a bag limit of one caribou as allowed in regulations. Reported harvest under the bag limit of one caribou was only 43 caribou by 75 hunters in RY2016. Historically, the inaccessibility of most of herd to the low human population (< 2,000 people), has not provided the harvest necessary to contain the herd within the objective of 4,000 caribou. Nonresident harvest is relatively low due to the remoteness, and is closely tied to brown bear seasons which occur every other year. This under-harvest led to declines in population and habitat quality because of the high density of caribou in proportion to the relatively low landmass of 3,820 square miles in Unit 9D.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal with the minor clarifying regulatory amendments in bold and underlined above. Harvest on the SAP should be increased commensurate with herd growth with adaptive bag limits to offset the low number of hunters accessing Unit 9D in order to stay within the intensive management objectives for this herd. Changes in bag limit will be published in the annual hunting regulations and through news releases.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 127 – 5 AAC 85.025. Seasons and bag limits for caribou. Open a resident hunting season for caribou in a portion of Unit 9C.

PROPOSED BY: Naknek/Kvichak Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? Combine the normally-closed (unless opened by EO) registration caribou hunt (RC504) in a portion of Unit 9C with the extant Mulchatna caribou herd (MCH) registration hunt RC503 (Figure 127-1).

WHAT ARE THE CURRENT REGULATIONS? RC504 includes that portion of 9C north of the north bank of the Naknek and south of the Alagnak River drainage (Figure 127-1). Bag limit is one caribou and season “may be announced” if MCH caribou move south into the RC504 hunt area when the risk of harvesting Northern Alaska Peninsula caribou is minimized.

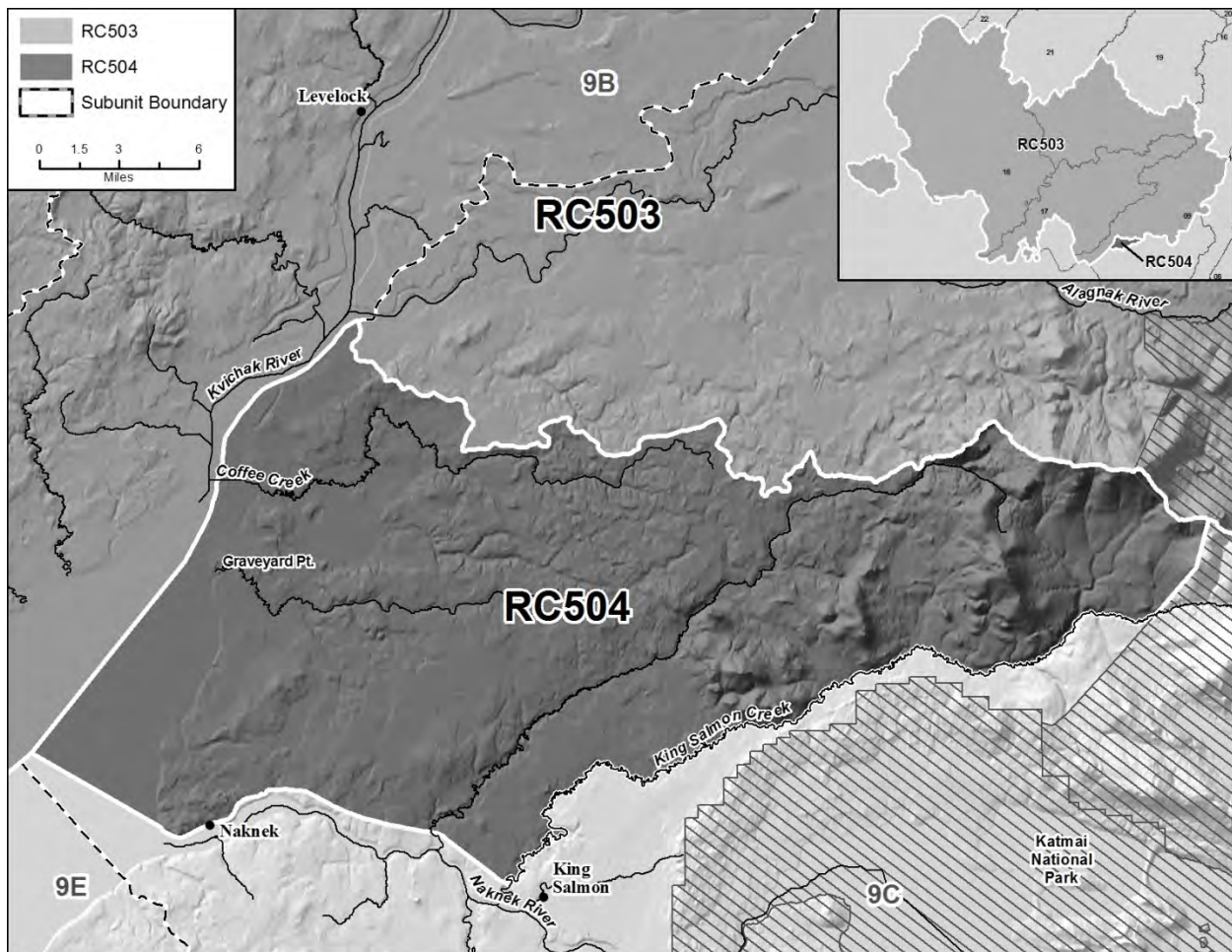


Figure 127-1. Current boundaries for the Unit 9, RC504 hunt relative to the Mulchatna Caribou Herd, RC503 hunt area.

RC503 includes Unit 9A and the Alagnak River drainage of 9C open August 1–March 15 and Unit 9B and most of Unit 17 open August 1–March 31 with a bag limit of two caribou.

There is a positive customary and traditional use finding for the Mulchatna Herd in Unit 9A, and the amount necessary for subsistence for the entire range of the Mulchatna Herd in Units 9A, 9B, 17, 18, 19A south of the Kuskokwim River, and Unit 19B is 2,100–2,400. There is also a positive customary and traditional use finding for the Northern Alaska Peninsula Herd in Units 9C and 9E, and an amount necessary for subsistence of 1,200–1,900.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The RC504 portion of Unit 9C would become part of the RC503 permit area, with season dates of August 1–March 31. This would allow hunters from Naknek and King Salmon opportunity to access Unit 9C by snowmachine, ATV or possibly by boat. This proposal would also simplify regulations by combining hunts and bag limits in 9C with the adjacent MCH hunt RC503.

BACKGROUND: Beginning in 1986 when the Northern Alaska Peninsula caribou herd (NAP) was very large, a portion of the herd (identified with radiocollars) wintered between the Naknek

and Alagnak rivers in what was traditionally the MCH range. Since 2000, this extended wintering range was largely abandoned by the NAP as the herd rapidly declined in size. Registration caribou hunt RC504 was initiated in 2004 when the NAP was on the decline, but there was still concern by managers over caribou crossing the Naknek River. The intent was for RC504 to remain closed if the NAP crossed the river because they would likely be susceptible to harvest. If the NAP remained south of the Naknek River and the MCH moved into the hunt area, RC504 was opened by emergency order (EO). Since 2004, RC504 was opened five times by EO – the last being in 2013. The years that the hunt remained closed were because the MCH failed to move into the hunt area, not due to the NAP crossing the Naknek River. The NAP has not crossed the river in significant numbers since the early 2000s. Any additional harvest in the RC503 hunt would be insignificant compared with the current harvest.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocation portion of this proposal, and the department **SUPPORTS** this proposal to simplify regulations for the MCH since there is no longer a biological concern for the NAP in this hunt area.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 128 – 5 AAC 85.025. Hunting seasons and bag limits for caribou. Allow the harvest of any caribou in Unit 10, Adak Island.

PROPOSED BY: John Bush

WHAT WOULD THE PROPOSAL DO? Eliminate the general harvest season and bag limit restrictions to allow the harvest of any caribou on Adak Island in Unit 10 with no closed season.

WHAT ARE THE CURRENT REGULATIONS? No closed season and no bag limit except that no more than two bulls may be taken and no bulls may be taken during January 1–August 9.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Any caribou could be taken year round with no bag limit and no closed season which would likely increase bull harvest and result in a decline in hunter participation. The department would also no longer be able to collect harvest data if a harvest ticket were no longer required.

BACKGROUND: Caribou on Adak Island were introduced in the 1950s to provide food and recreation for military personnel stationed at Naval Air Facility Adak. The caribou population was kept in check by heavy harvest pressure from the facility until the U.S. Navy decommissioned Adak in 1994. After the Navy departed the caribou population increased exponentially from several hundred animals in the late 1980s to approximately 3,000 animals by August 2005 according to the U.S. Fish and Wildlife Service (USFWS). The latest USFWS survey in 2012 yielded an estimate of 2,500–2,880 caribou, indicating that the population increase had halted. The USFWS is in favor of reducing the caribou population size to protect habitat. There are no natural predators on Adak.

Reported Caribou Harvest on Adak Island			
Year	Cows	Bulls	Total
2010	205	111	316
2011	185	103	288
2012	168	78	246
2013	162	69	231
2014	152	62	214
2015	134	68	202

In spring of 2004 Alaska Airlines began regularly scheduled flights to Adak Island, which within a few years resulted in a large increase in the number of non-local caribou hunters seeking trophy bulls and also increased the resident population of the island. One guide estimated that roughly 300 non-local caribou hunters came to the island in 2006. Current regulations were implemented by the Board in 2007 to encourage cow harvest in a further effort to control population size, and to maintain the potential for trophy-sized bulls. Trophy bulls provide a strong incentive for hunters to travel all the way to Adak Island to hunt caribou. Without this incentive harvest may decrease to a level that could not control population growth which would cause long-term damage to habitat.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal because the risk of harvesting too many bulls could result in a decline in necessary hunter participation. Determining sex of caribou in the field is not overly difficult; the department has resources on the subject in the regulations book, online, and at area offices. The department is also opposed to losing harvest data for this caribou herd.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 129 – **5 AAC 85.045. Hunting seasons and bag limits for moose.** Lengthen the resident moose hunting season in Unit 9B.

PROPOSED BY: Lake Iliamna Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? Lengthen the resident hunting season for moose in Unit 9B by five days.

WHAT ARE THE CURRENT REGULATIONS? Regulations for residents are one bull by registration permit (RM272) during September 1–15 or one antlered bull December 15–January 15. For nonresidents the regulations are one bull with 50-inch antlers or four or more brow tines on at least one side, September 5–15.

There is a positive customary and traditional use finding in Units 9A, 9B, 9C, and 9E with an amount reasonably necessary for subsistence of 100-140 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Extend the fall registration season (RM272) for residents by five days to September 20, allowing more opportunity to hunt moose closer to the rut. This would also align the fall moose season with the adjacent Unit 9C, however, the hunt would no longer be aligned with Unit 9A (RM271). If adopted this proposal will likely result in an increase in harvest.

BACKGROUND: The current fall season dates took effect in 1990 and the first year of registration permits was 2011. Recent survey results and harvest data indicate that an increase in bull harvest would be sustainable. During a composition survey in 2016 in Unit 9B the department observed a ratio of 54 bulls:100 cows. In 2012 a Geospatial Population Estimator survey in Unit 9B provided a population estimate of 1,160 moose. Average annual harvest in Unit 9B is 38 bulls since 2010 (approximately 3% of the population estimate); reported harvest in RY16 was 60 bulls, the highest harvest since 1999. The number of hunters has ranged from 74 to 174 since 2010.

Moose often remain in upper elevations in early September, making them difficult to reach by most local hunters using river and stream corridors to hunt. Adding five days to the season allows moose more time to move into lower elevations and become more available prior to the rut.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on increasing the harvest since there are no biological concerns. Adopting this proposal will align the fall season dates between Units 9B and 9C, which will simplify the regulations and because the two areas are managed on the same registration permit: it will remove some of the complexity on that permit. It does, however, take Unit 9B out of alignment with the fall season in Unit 9A, although Unit 9A is managed with a different registration permit.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 130 – AAC 92.052. Discretionary permit hunt conditions and procedures.

Allow hunters to obtain Unit 9B registration moose permits online and in other locations

PROPOSED BY: Beaver Creek Hunting Group

WHAT WOULD THE PROPOSAL DO? Allow hunters to obtain Unit 9B registration moose permits (RM272, RM282) online and/or at other convenient locations.

WHAT ARE THE CURRENT REGULATIONS? Registration permits are available in villages throughout Unit 9B and King Salmon (Unit 9C) beginning August 16, and the hunt opens September 1. The permit hunt conditions limiting availability of registration permits in Unit 9B and 9C are done under the department's discretionary authority, not in regulation, and therefore do not require Board action. However, when permit availability addresses user conflicts and participation, the department defers to direction from the board.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Providing permits online will make them more available to those who prefer to get them online. More permits will likely be issued and participation may increase. This could result in an increase in user conflicts. To the degree obtaining permits is made more difficult by not being available online, reporting may increase. Permits available online will also decrease errors in permitting and reporting.

BACKGROUND: Registration permits for moose were initiated in 2011 in Unit 9. A moose working group in 2010, represented by federal, state, and local government agencies, Alaska Native organizations, the guiding industry, Fish and Game Advisory Committees and local hunters developed a series of recommendations to increase moose hunting opportunities and reduce user conflicts among local and nonlocal hunters. Among those recommendations pertaining to permit availability were to: 1) have department staff issue registration permits in villages and towns of Units 9B and 9C, but not in communities outside of Unit 9; 2) offer village Tribal council offices the opportunity to issue registration permits in Unit 9B; and 3) have permits available online for all hunters. Having permits available online was a consensus recommendation by the working group, but following the meeting there was disagreement about how permits should be distributed. Ultimately, permits were only issued in villages.

The department has visited villages annually to issue registration permits, and set up village council Tribal offices and one vendor to help issue registration permits. As hunters have become more familiar with registration permits many have questioned why permits are not available online. Often business hours are not convenient for hunters in remote areas.

In October 2017 the Naknek-Kvichak and Lake Iliamna Fish and Game advisory committees voted unanimously to support online registration for moose permit hunts in Units 9B and 9C, provided that the department monitor the number of non-local hunters carefully during the next two years and reinstate the condition if non-local harvest increases significantly. The department intends to continue visiting villages to issue permits and to provide village Tribal council offices with permits regardless of online availability. We will also continue to limit in-person registration to Unit 9 locations only.

DEPARTMENT COMMENTS: The department recommends that the Board **TAKE NO ACTION** on Proposal 130. The department asks that the board provide clear direction on how permits should be distributed in the units.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 131 – 5 AAC 85.020. Hunting seasons and bag limits for brown bear. Remove the brown bear bag limit of one bear every four years for residents in Unit 9.

PROPOSED BY: Resident Hunters of Alaska.

WHAT WOULD THE PROPOSAL DO? Change the brown bear bag limit from one bear every four years to one bear per year for Alaska residents in Unit 9.

WHAT ARE THE CURRENT REGULATIONS? The regulations are one brown bear every four regulatory years, September 1–October 21 and May 10–31 in Unit 9B, and October 1–21 and May 10–31 in the remainder of Unit 9. Biennial seasons are open every other year during odd years in the fall and even years in the spring, and have been in effect since 1976. Residents and nonresidents have the same seasons and bag limits for registration permit hunts RB368, RB369, and RB370. Residents may also hunt bears near towns and villages of Unit 9 with a RB525 registration permit that has no closed season and a one bear per year bag limit.

There is a negative customary and traditional use finding for brown bears in Units 9A, 9C, and 9D; a positive customary and traditional use finding in Unit 9B with an amount reasonably necessary for subsistence of 10–20; and a positive customary and traditional use finding in Unit 9E with an amount reasonably necessary for subsistence of 10–15.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow residents a bag limit of one brown bear per year for all registration permit hunts in Unit 9 which would increase bear harvest, but by how many bears is difficult to determine. Currently, resident hunters report killing 80–90 bears per open biennial season; therefore, a reasonable estimated harvest would be 80 bears per year, or 320 bears over a 4-year period, versus the current 160–180 bears per four-year period: essentially a doubling of the resident harvest.

If the intent of the proponent is to allow the harvest of one bear per year in Unit 9 specifically, the board will need to change the bag limit and also change the Unit 9 season dates. If only the bag limit is changed, the hunter will be permitted to harvest one bear per year in Unit 9 during years when the biennial hunt is open in Unit 9. Therefore, in closed years in Unit 9 the hunter would be permitted to harvest one bear per year in the Unit 9 RB525 one bear per year hunt, or in another game management unit that has a one bear or greater per year bag limit.

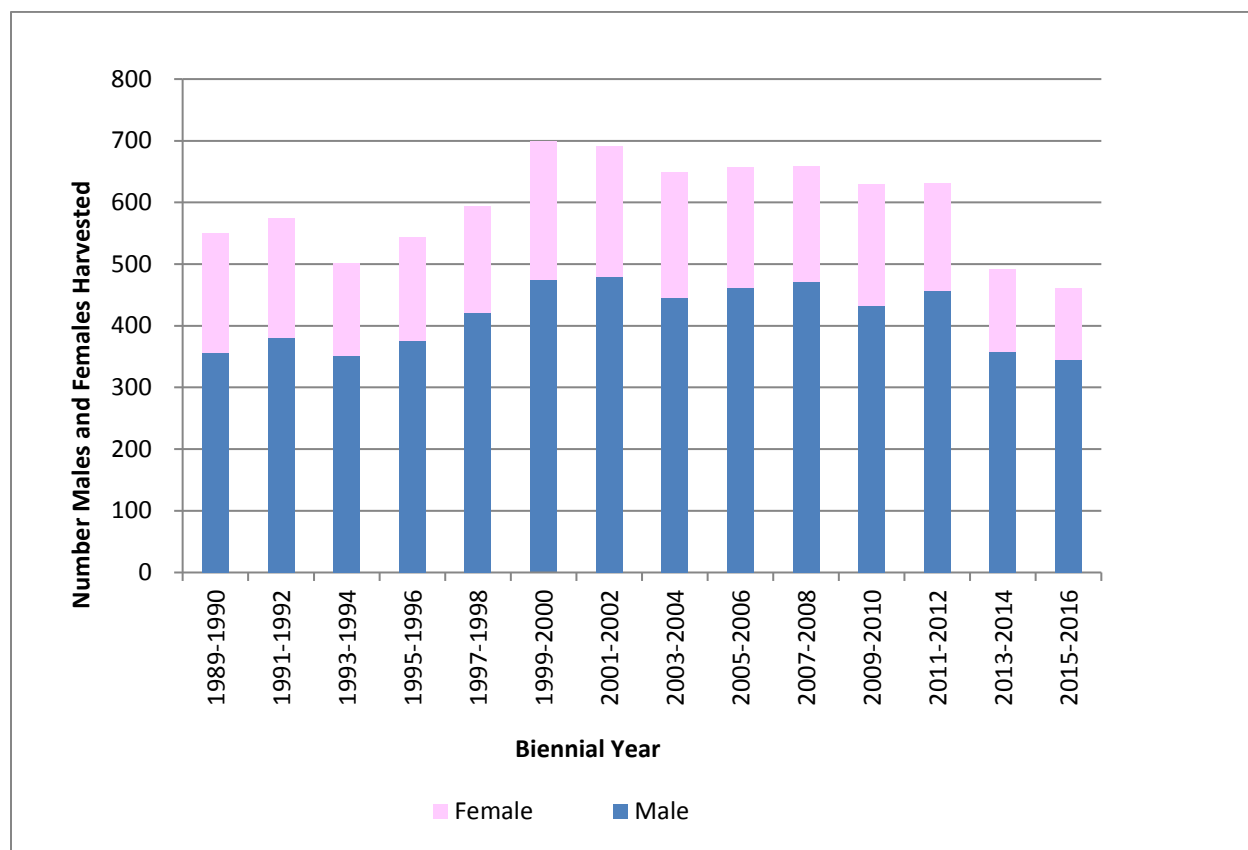
BACKGROUND: The majority of Alaska residents who hunt bears in Unit 9 do not harvest more than one bear in the unit. Since 2005 only 1.1% (38 hunters) of 3,466 successful resident bear hunters reported killing more than one bear in Unit 9. Nonresident hunters on average take about 80% of the bear harvest in Unit 9 because they comprise approximately 74% of all hunters, and have a higher success rate than residents because of the guide requirement.

The brown bear management objectives in Unit 9 are to maintain a high bear density with 1) a sex and age structure that will sustain a harvest composed of 60% males, and 2) with 50 males eight years of age (YOA) or older taken each biennial season. These objectives have been met every season since 1982. On average per hunt period nonresidents hunters took 132 females (28%) and residents took 40 females (34%) during the last 30 years.

However, brown bear harvest in Unit 9 has been declining since the 2000–2001 hunt period (biennial hunt periods are two years, combined) when harvest peaked at 700 bears (Figure 131-1). The 2014–2015 harvest of 470 bears was the lowest on record since 1984. Since 2013, local residents, guides, and hunters have commented on the reduced number of bears observed on the

Alaska Peninsula. Large bears became more difficult to find for hunters, although this was complicated by warm, stormy weather in the fall. In recent years department staff observed fewer bears and a dearth of large bears during ungulate surveys. Beginning in 2016 the department also observed a noticeable increase in the number of sows with multiple cubs.

Figure 131-1. Unit 9 brown bear total biennial harvest by sex, RY89–RY16.



Based on sealing records, there is very little change in the number of days hunted per bears killed in Unit 9, which has ranged from four to five days since the late 1960s. Registration permit hunts indicated a decreasing success rate, from 64% to 55% in 2011 through 2015, with similar numbers of hunters participating.

Along with declining harvest, there are concerns related to changes in the age structure of the harvest that have occurred since 2010, which included three biennial open seasons. The proportion of males in the harvest greater than eight YOA increased from a 40-year (1968-2009) range of 20–30%, to 54% during the 2010–2015 period – an abrupt increase of 41%. During 2014–2015, the latest hunt period for which we have age data, the proportion of older males in the harvest had increased to 69%, more than doubling the long term average. The average maximum age of males in the harvest increased each decade from the 1970s through 2000s, and decreased during the recent 2010–2015 period. After four decades of remaining between 23.5

and 24 inches, average male skull size increased nearly one inch, to 24.9 inches, during the 2010–2015 period.

During the previous four decades the proportion of adult females (i.e., > 4 YOA) in the female harvest remained consistently near 50% until the 2010–2015 period, when this proportion suddenly increased to 77% adult females in the female harvest. There has been no apparent change in the maximum age of females harvested over the decades. The percent of females in the overall harvest averaged 36% in the 1980s, and decreased to 31% in the 1990s, 30% in the 2000s, and 29% in the 2010s (Figure 131-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on aspects related to allocation between residents and nonresidents. The department is concerned that additional harvest resulting from this proposal could have long term population effects. With harvest on a long-term decline, and possibly an increasing rate of decline, we believe that abrupt changes in these parameters indicate that harvest is contributing to an aging of the population and to population decline. The high proportion of older-aged bears in the harvest may indicate that current harvest is not sustainable.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 132 – 5 AAC 85.020. Hunting seasons and bag limits for brown bear. Open a resident-only early season for the current registration brown bear hunts in Unit 9, or open resident-only registration or drawing permit hunts.

PROPOSED BY: Resident Hunters of Alaska

WHAT WOULD THE PROPOSAL DO? Open resident-only registration or drawing hunts during the currently closed odd year spring and even year autumn seasons, or open a resident-only early season hunt under the current registration brown bear hunts in Unit 9.

WHAT ARE THE CURRENT REGULATIONS? Regulations are one brown bear every four regulatory years, September 20–October 21 and May 10–31 in Unit 9B, and October 1–21 and May 10–31 in the remainder of Unit 9. Biennial seasons are open every other year during odd years in the fall and even years in the spring and have been in effect since 1976. Residents and nonresidents have the same seasons and bag limits for registration hunts RB368, RB369, and RB370. Residents may also hunt bears near towns and villages of Unit 9 with a RB525 permit with no closed season and a one bear per year bag limit.

There is a negative customary and traditional use finding for brown bears in Units 9A, 9C, and 9D; a positive customary and traditional use finding in Unit 9B with an amount reasonably

necessary for subsistence of 10-20; and a positive customary and traditional use finding in Unit 9E with an amount reasonably necessary for subsistence of 10-15.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Solution

One of the proposal would alternate resident-only seasons with combined-residency seasons that could potentially double resident harvest over the current harvest. Currently, resident hunters report killing 80–90 bears per open biennial season; therefore, a reasonable estimate of potential harvest would be 80 bears per year, or 320 bears over a 4-year period, versus the current 160–180 bears per 4-year period: essentially a doubling of the resident harvest for an unlimited registration hunt.

Another option for Solution One is registration hunts with harvest quotas, whereby a season would be closed after the quota is reached. The proponent also suggests drawing hunts as an option for new resident-only hunts. This would mean that we hold one to four drawing hunts (depending on how seasons and subunits are divided) for about 250 resident hunters for an approximate quota of 40 bears (or whatever number determined by the Board). These scenarios could be useful in reducing harvest and would limit conflicts between guides and unguided hunters to regular seasons, but would require additional administrative effort and cost to the hunts.

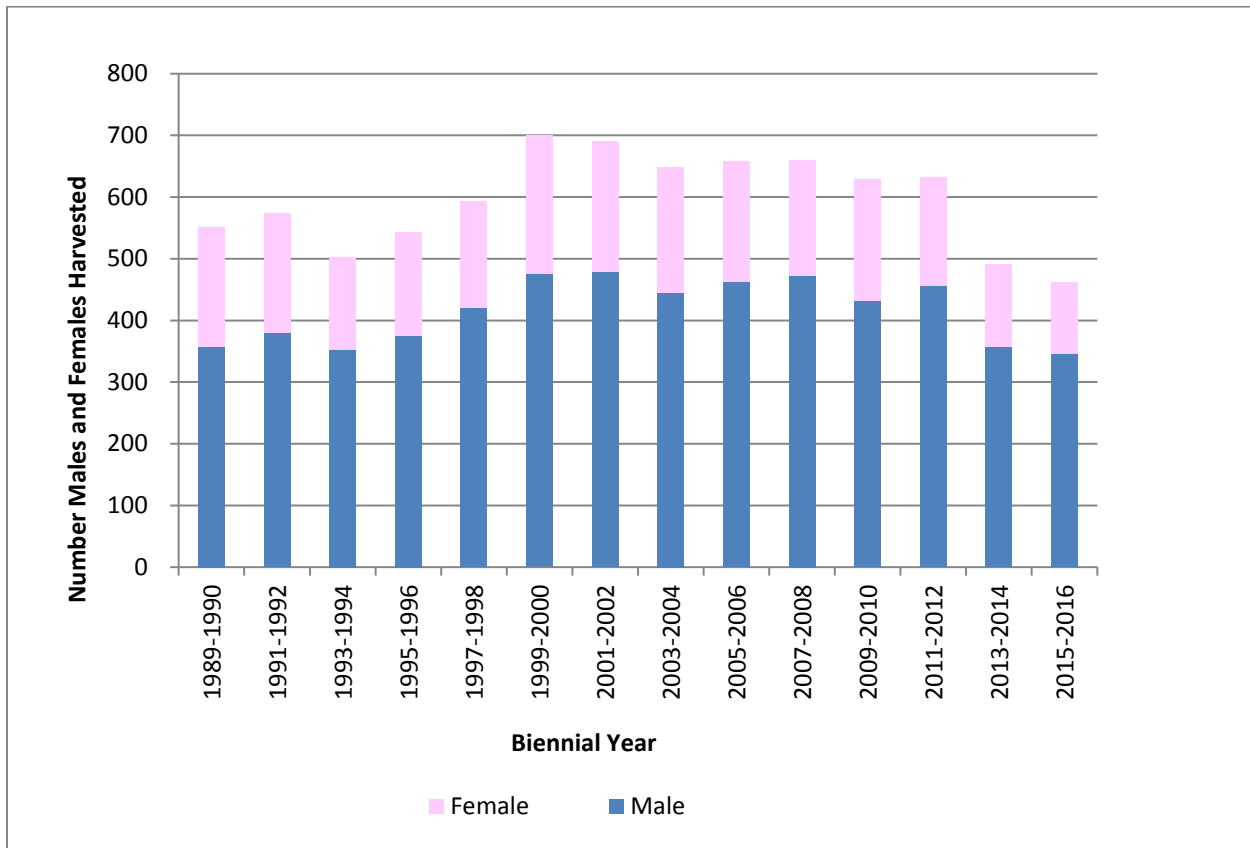
A resident-only season during the first five days of the hunt proposed as Solution Two would shorten the nonresident season by the same. The net effect would be a reduction in harvest because 1) nonresidents outnumber and out-hunt residents because of the nonresident guide requirement, and 2) most bears are harvested by nonresidents during the first week of the season. It would also reduce the number of hunting parties or lengths of hunts that guides could accommodate.

BACKGROUND: During the last three hunt periods about 250 residents have hunted under registration hunts per biennial season. The majority of Alaska residents who hunt bears in Unit 9 do not harvest more than one bear in the unit. Since 2005 only 1.1% (38 hunters) of 3,466 successful resident bear hunters reported killing more than one bear in Unit 9. Nonresident hunters on average take about 80% of the bear harvest in Unit 9 because they comprise approximately 74% of all hunters, and have a higher success rate than residents because of the guide requirement.

The brown bear management objectives in Unit 9 are to maintain a high bear density with 1) a sex and age structure that will sustain a harvest composed of 60% males, and 2) with 50 males eight years of age (YOA) or older taken each biennial season. These objectives have been met every season since 1982. On average per hunt period nonresidents hunters took 132 females (28%) and residents took 40 females (34%) during the last 30 years.

However, brown bear harvest in Unit 9 has been declining since the 2000–2001 hunt period (biennial hunt periods are two years, combined) when harvest peaked at 700 bears (Figure 131-

1). The 2014–2015 harvest of 470 bears was the lowest on record since 1984. Since 2013, local residents, guides, and hunters have commented on the reduced number of bears observed on the Alaska Peninsula. Large bears became more difficult to find for hunters, although this was complicated by warm, stormy weather in the fall. In recent years department staff observed fewer bears and a dearth of large bears during ungulate surveys. Beginning in 2016 the department also observed a noticeable increase in the number of sows with multiple cubs.



Based on sealing records, there is very little change in the number of days hunted per bears killed in Unit 9, which has ranged from four to five days since the late 1960s. Registration permit hunts indicated a decreasing success rate from 64% to 55% in 2011 through 2015, with similar numbers of hunters participating.

Along with declining harvest, there are concerns related to changes in the age structure of the harvest that have occurred since 2010, which included three biennial open seasons. The proportion of males in the harvest greater than eight YOA increased from a 40-year (1968-2009) range of 20–30%, to 54% during the 2010–2015 period – an abrupt increase of 41%. During 2014–2015, the latest hunt period for which we have age data, the proportion of older males in the harvest had increased to 69%, more than doubling the long term average. The average maximum age of males in the harvest increased each decade from the 1970s through 2000s, and decreased during the recent 2010–2015 period. After four decades of remaining between 23.5

and 24 inches, average male skull size increased nearly one inch, to 24.9 inches, during the 2010–2015 period.

During the previous four decades the proportion of adult females (i.e., > 4 YOA) in the female harvest remained consistently near 50% until the 2010–2015 period, when this proportion suddenly increased to 77% adult females in the female harvest. There has been no apparent change in the maximum age of females harvested over the decades. The percent of females in the overall harvest averaged 36% in the 1980s, and decreased to 31% in the 1990s, 30% in the 2000s, and 29% in the 2010s (Figure 131-1).

The number of registered guides operating on federal lands in Unit 9E is limited and managed by a prospectus process, whereas there is no limit placed on guides on state lands. Private Native corporation land holders also generally restrict the number of guides operating on their lands through concessions. This generally reduces localized high density of guide operations and concomitant harvest in associated federal and privately-held land areas.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on aspects related to allocation between residents and nonresidents. Setting quotas would be somewhat arbitrary because we do not know population sizes or harvestable surplus. Given the long-term decline in bear harvest in Unit 9, an additional hunt for residents could be reasonably set at half of the current resident harvest, or around 40 bears split between two or three registration hunts. If the board wishes to change the allocation, we recommend that there either no net increase or a net reduction in harvest is advisable at this time, given long-term harvest decline. If the board wishes to increase resident harvest, they should decrease the nonresident harvest commensurately.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 133 – AAC 85.020. Hunting seasons and bag limits for brown bear. Change the nonresident brown bear registration hunt in Unit 9E to drawing permit hunt.

PROPOSED BY: Lance Kronberger

WHAT WOULD THE PROPOSAL DO? Change the nonresident brown bear registration hunts RB368 and RB 370 in a portion of Unit 9E to drawing permit hunts to reduce harvest.

WHAT ARE THE CURRENT REGULATIONS? Regulations in Unit 9E are one brown bear every four regulatory years, October 1–21 and May 10–31. Biennial seasons are open every other year during odd years in the fall and even years in the spring, and have been in effect since 1976. Residents and nonresidents have the same seasons and bag limits for registration hunts RB368 and RB370. Residents may also hunt bears near towns and villages of Unit 9 with a RB525 permit with no closed season and a one bear per year bag limit.

There is a positive C&T finding for brown bears in Unit 9E and an amount reasonably necessary for subsistence of 10–15 bears.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal is expected to reduce brown bear harvest on state lands in Unit 9E in the Cinder, Mud and Meshik river drainages by limiting this nonresident harvest to ten drawing permits. The ten draw permits would be divided between each of two areas: i.e., five in state land south of Cinder River to Mud Creek, and five in state land south of Mud Creek to Meshik River. The nonresident bag limit in Unit 9E would remain one brown bear every four regulatory years. The proposal if adopted, has potential to reduce the harvest in this small area by five to ten bears.

BACKGROUND: The number of registered guides operating on federal lands in Unit 9E is limited and managed by guide concessions, whereas there is no limit placed on guides on state lands. Alaska Native corporation land owners also generally restrict the number of guides operating on their lands through concessions. Bears killed on state versus non-state lands in the Cinder, Mud, and Meshik rivers and drainages (UCUs 1001, 1002 and 1101) cannot be readily separated, therefore harvest is reported here for the entire drainages.

Total harvest in these drainages has declined by 50% since 2005 (Figure 133-1). Harvests in 2012–2013 (30 bears) and 2014–2015 (22 bears) were the lowest reported since 1979. Proportion of male bears ≥ 8 years of age (YOA) in the harvest increased from a long-term (1986–2004) average of 30% to 51% in the last decade, and to 73% during the last harvest period, RY15–RY16. Adult females (> 4 YOA) in the total harvest increased from a long term average of 50% adults to nearly 70% adults in the female harvest during the last decade, RY06–RY15. The proportion of females in the harvest has remained within the management objective of $< 40\%$ and has declined in recent years (Figure 133-1).

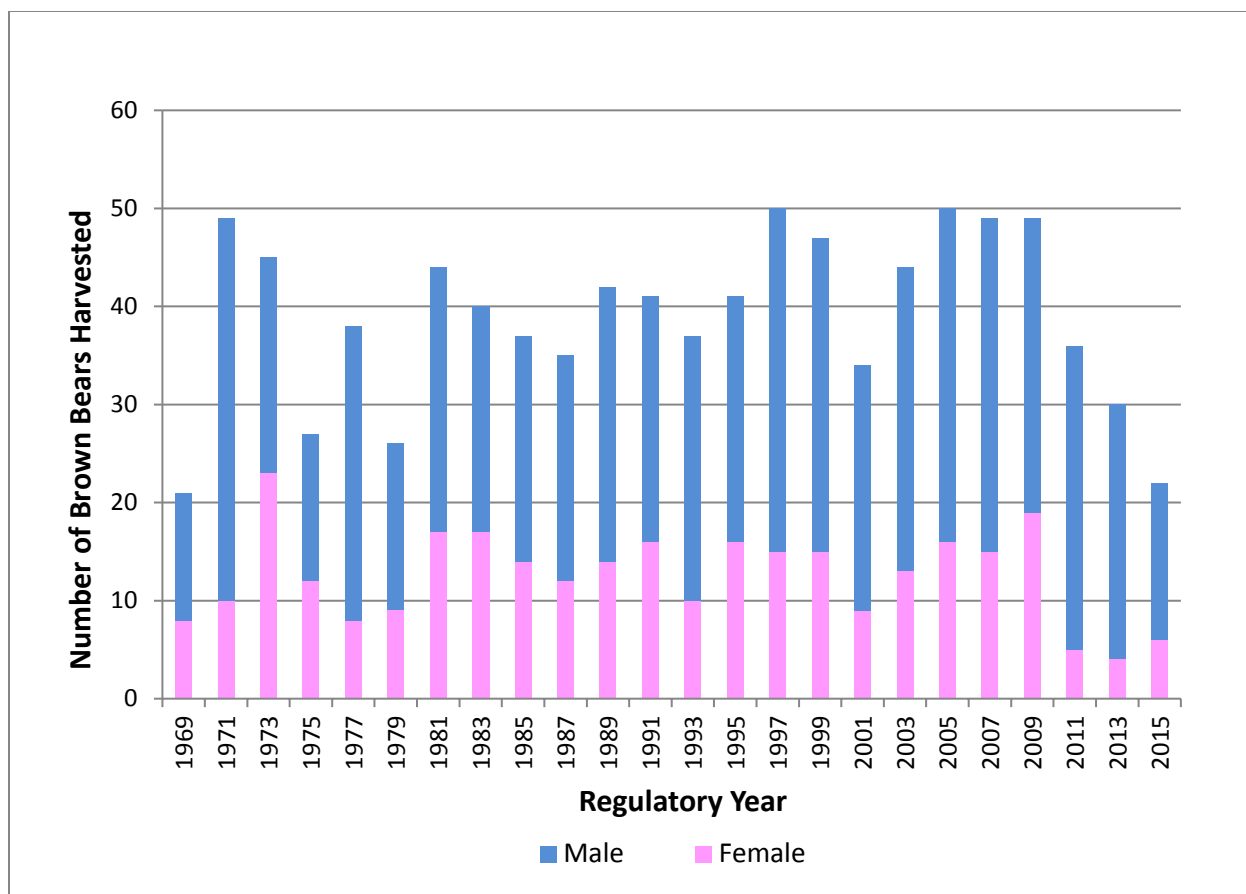


Figure 133-1. Unit 9E brown bear harvest by sex, Cinder River to the Meshik River, RY69 – RY15.

Harvest trends for Unit 9E as a whole are similar to, and partly driven by, harvest in the Cinder, Mud, and Meshik river drainages. Harvest in Unit 9E has declined by 42% since 2004. Harvest in 2014–2015 (214 bears) was the lowest reported since the mid-1970s, when the bear population was considered depleted because of overharvest. As a result, in 1976 the Board established two-week seasons open every other year. Since then, 11 of 27 biennial hunts have had two-week seasons.

Proportion of male bears ≥ 8 YOA in the harvest has increased from a long term (1968–2009) average of 15–30% to 52% since 2010, and to 65% during the last harvest period, RY15–RY16. Adult females in the female portion of the harvest have increased from a long-term average (1968–2009) of 50% to 80% since 2010. This increasing proportion of older bears in the harvest is difficult to explain. It might be that under heavy harvest pressure, the oldest and most experienced bears now represent a relatively large component of legal bears. Changes in age structure on the harvest may be unrelated to harvest and instead indicative of high natural mortality to adult cohorts occurring during the winters of 2011 and 2012 with heavy snow and delayed springs.

We do not know population size or harvest rate for bears in Unit 9E or Unit 9 overall. However, given the continuing decline and historically low harvest, the department is considering options to reduce bear harvest and protect female bears from harvest. During the last decade female bears were most vulnerable to harvest in Unit 9E during the fall season (70% of total female kill) and particularly during the first week of the hunt when 48% of total female harvest occurs (which was 68% of the fall female harvest). About 55% of spring female harvest occurred during the first week of the spring season. Therefore the most effective manner to protect female bears would be to delay the season openings by one week. Male bear harvest was split 50% between seasons with some variation between years. Similar to female harvest, most fall and spring male harvest occurred during the first week of respective seasons. Therefore delaying each season by one week would probably provide the greatest overall reduction in harvest as well as protecting females. From a historical perspective, an October 7–21 fall season was in effect for at least 11 of the last 29 open hunting seasons in Unit 9E, primarily during the 1980s and 1990s while bear harvest was increasing.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on aspects related to allocation between residents and nonresidents. The department **SUPPORTS** a reduction in bear harvest in Unit 9E. The department also recommends a delay in opening seasons by one week (to October 8 in fall, and May 16 in spring) for nonresidents, and otherwise retaining the current registration permit hunts.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 134 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Shorten the season for ptarmigan and reduce the bag limit in Unit 9.

PROPOSED BY: Lake Iliamna Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? Shorten the season for ptarmigan and reduce the bag limit in Unit 9.

WHAT ARE THE CURRENT REGULATIONS? For residents and nonresidents, season dates are August 10–April 30, with a bag limit of 20 per day, 40 in possession for Unit 9.

The board has not determined if there is a customary and traditional use finding for ptarmigan in Unit 9.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The season would be shortened by two months in the spring, ending March 1 and bag and possession limits would be reduced by half. This would reduce harvest mortality immediately prior to the spring breeding season (April–May).

BACKGROUND: Based on staff observations while conducting fieldwork on the Alaska Peninsula, as well as hunter and pilot reports from local communities, willow and rock ptarmigan in Unit 9 have declined severely since 2014. Few ptarmigan have been observed from Lake Iliamna to Unimak Island, a land mass of approximately of 25,000 square miles. Large winter flocks commonly observed and often including hundreds of birds have declined to very few flocks containing only a few birds. The public has expressed ongoing concern over the decline. Contributions of ptarmigan wings from Unit 9 to the statewide wing collection program have declined significantly since 2015. The department has no recent household surveys or other monitoring efforts in place. We speculate that the decline was caused by cold, rainy periods in June 2015 and 2016. These conditions have caused very high chick mortality among two separate rock and willow ptarmigan populations under investigation in Alaska.

Additionally, several relatively snow-free winters were documented in 2015 and 2016 throughout Unit 9 which can increase mortality due to plumage/landscape mismatch also documented among several recent research studies in Alaska. Investigations in Norway, Iceland, and recently in Alaska suggest ptarmigan populations can experience additive mortality when hunted during the winter months (December–March); a period that has been repeatedly documented to have low natural mortality among studied populations. Hunters consulted in Unit 9 and the Naknek-Kvichak area and the proponent advisory committee have been supportive of taking conservation measures that allow ptarmigan numbers to increase.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal with an amendment because of the low densities of willow and rock ptarmigan observed in recent years on the Alaska Peninsula and Unimak Island by local residents. While refugia from hunting pressure likely protect the populations, the department agrees that a reduction in harvest may enhance local recovery of birds and that the department monitor ptarmigan through wing collections and observations during ungulate surveys. The department also recommends the proposal be amended to close the season on the last day of February to be consistent with ending seasons on the last day of the month, rather than the first day of the month, and to account for leap years.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 135 – 5 AAC 85.065. Hunting seasons and bag limits for small game. Close the season for Alaska hares in Unit 9.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? Close the hunting season for Alaska hares in Units 9C, 9D and 9E.

WHAT ARE THE CURRENT REGULATIONS? Currently there is no closed season and no bag limit for Alaska hares in Unit 9.

The board has not determined if there are customary and traditional uses of Alaska hares in Unit 9.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? There would be no open season to hunt Alaska hares on the Alaska Peninsula from Unit 9C south to Units 9E and 9D.

BACKGROUND: The once abundant Alaska hare (locally known as “jackrabbit”) in Unit 9 as recently as the 1980s is now at a very low density and has a patchy distribution in the southern portion of the Alaska Peninsula. Very little is known about the Alaska hare, but the apparent decrease in abundance may have been caused by changes in habitat, predation, or other natural cyclical events. A small Alaska hare population has been reported in Unit 9D and there are infrequent observations of Alaska hare sign near King Salmon and other towns. The department does not currently monitor Alaska hare populations (i.e., they are not listed separately as a prey species in the Trapper Questionnaire survey) and has no estimates of abundance. However the low density in Units 9C, 9D and 9E is of biological concern. Alaska hares are not highly productive; they have only one, relatively small-sized litter of leverets per year similar to more long-lived, K-selected species who invest more in fewer offspring. We believe that the limited-management approach of the last 50 years no longer addresses conservation of this species.

While the closure of the Alaska hare season would result in a slight decrease in hunting opportunity, snowshoe hare hunting opportunity would remain open in the area. Nearly all local hunters consulted in Unit 9 are aware of the differences between the species while many non-hunters are surprised by the existence of another hare species. If climatic or habitat conditions are favorable for Alaska hares return to the southern Alaska Peninsula, a low hunter harvest could protect localized populations for quicker recovery and recolonization.

Currently the department is reaching out to advisory committees, towns, and villages with educational information on Alaska hares, and has provided a means for people to report their observations of the species back to us. Efforts are underway by the department to evaluate both abundance monitoring methodologies as well as population vital rates. The plan is to employ an abundance monitoring effort throughout portions of the Alaska hares’ range including Unit 9 within the next three to four years.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal with the following amendments: 1) open a hunting season November 1–January 30 to coincide with trapping season; 2) include all of Unit 9; 3) add a bag limit of one per day and four per year and 4) have a mandatory (or voluntary) reporting requirement by successful hunters which would entail a phone call to the King Salmon area office. By holding a limited hunt with a reporting requirement, the department can potentially learn more about distribution and abundance of Alaska hares on the peninsula, and direct research efforts toward areas occupied by Alaska hares.

If the board chooses to act on this proposal, it should also consider making a customary and traditional use finding for Alaska hares in GMU 9.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 136 – 5 AAC 85.045(15). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose season in Unit 17A.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the antlerless moose season for the Unit 17A winter moose hunt.

WHAT ARE THE CURRENT REGULATIONS?

- The current regulations for the Unit 17A moose hunt allow resident hunters a bag limit of two moose per regulatory year.
- A fall hunt during August 25–September 20 for resident hunters is managed under registration permit RM573, with a bag limit of one bull moose.
- The winter hunt is managed through the use of two registration permits: RM575 for one antlered bull moose and RM576 for one antlerless moose. The regulations state that “up to a 31-day season may be announced December 1–the end of February”.
 - The winter hunt is opened by emergency order authority, when good snow conditions exist for winter travel.

There is a positive customary and traditional use finding in Unit 17 with an amount reasonably necessary for subsistence of 100–150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would reauthorize the antlerless moose hunt in Unit 17A. This antlerless hunt would continue to provide hunters with additional harvest opportunity while helping managers by limiting the population growth of the Unit 17A moose population, which is already beyond the upper limit of our population objectives.

Under the present hunt structure hunters can obtain two registration permits for the winter season, RM575 for one antlered bull and RM576 for one antlerless moose. When these hunts are running concurrently hunters will often have both permits and can harvest an antlerless moose and an antlered bull legally. However, if the antlerless season is closed because the quota is met, hunters would be limited to an antlered bull moose.

BACKGROUND: Moose are relative newcomers to much of Unit 17A, with only about 35 animals being present along the eastern border in 1980. Since then, moose have continued to increase in population size and expand throughout Unit 17A and west into Unit 18. Minimum counts of moose in Unit 17A were conducted in 14 different years during the period of 1991–2011, revealing a steady increase in moose numbers over time, with 1,166 moose counted in March 2011. During 2012–2015, surveys were not conducted due to inadequate snow conditions. Beginning in fall 2016, a Geospatial Population Estimator (GSPE) replaced the minimum count for enumerating moose in Unit 17A. In spring 2017, this survey technique produced an estimate of 2,388 animals. This is corrected for sightability (1.2 scf), so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437).

Moose management in Unit 17A has been guided by the Unit 17A Moose Management Group, consisting of members from the Bristol Bay Federal Subsistence Regional Advisory Council, the Nushagak and Togiak Fish and Game advisory committees, the Togiak National Wildlife Refuge, and the Alaska Department of Fish and Game. This group produced a Unit 17A Moose Management Plan, which went through several iterations during 1996–2013, with the 2013 plan

being used as the guiding document today. This plan has goals and objectives for hunter opportunity, harvest allocation, habitat mapping and population monitoring. The population objective for Unit 17A listed in the plan is 800–1,200 moose.

A drawing hunt for nonresident hunters was adopted by the board in 2013, with fall 2014 being the first year of that hunt. The impetus behind the nonresident hunt was abundant harvest opportunity provided by this growing moose population, and objectives within the moose management plan that provide for the nonresident opportunity when the moose population exceeds 1,000 animals and is at a stable or increasing trend.

An antlerless hunt was adopted by the board and initiated in RY13; it allows for an antlerless harvest when the moose population is above 600 animals and is stable or increasing. During the 4 years of the antlerless hunt, 51 antlerless moose have been taken (47 cows and 4 bulls), for an average of ~12 cows/year.

During RY2010–2016 the mean annual moose harvest in Unit 17 was 311 moose.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. The moose population in this unit is above the upper limit of the population objective. Allowing a small harvest of antlerless moose will help limit population growth while providing additional harvest opportunity for hunters.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 137 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Shift the Unit 17A fall resident moose season by starting and ending the season five days later than the existing season.

PROPOSED BY: Togiak Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? The proponent inadvertently used outdated regulatory language in their proposal that misrepresents the current seasons and bag limits; however, the intent of the proposed action listed in the proposal is valid. Therefore, this proposal would shift the resident fall moose season in Unit 17A to five days later for the registration permit hunt (RM573), from the present season dates of Aug. 25–Sept. 20, to the proposed season dates of Aug. 30–Sept. 25.

WHAT ARE THE CURRENT REGULATIONS? The current regulations for the Unit 17A moose hunt allow resident hunters a bag limit of two moose per regulatory year, and nonresidents a bag limit of one moose per regulatory year as follows:

- Fall resident season:
 - Registration permit RM573,
 - Season dates of Aug. 25–Sept. 20,
 - A bag limit of one bull moose.

- Fall nonresident season:
 - Drawing permit DM570, up to 50 permits may be issued but currently only 20 are being allocated annually,
 - Season dates of Sept. 5–Sept. 15,
 - A bag limit of one bull moose with 50-inch antlers or antlers with four or more brow tines on at least one side.
- Winter resident season:
 - Two registration permits, RM575 for one antlered bull, and RM576 for one antlerless moose,
 - Season dates of “up to a 31 day season may be announced during December 1–last day of February” may be announced by emergency order,
 - A bag limit of two moose.
 - The winter hunt is opened by emergency order authority when good snow conditions exist for winter travel.
 - In the December 2017 winter hunt, a guideline harvest level of 30 antlerless moose and 20 antlered bulls was established.

There is a positive customary and traditional use finding in Unit 17 with an amount reasonably necessary for subsistence of 100–150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted the shift in season dates would extend the hunting season further into the rut for bull moose, making them more vulnerable to harvest. During the past five seasons, the fall resident moose harvest in Unit 17A has increased steadily with a reported harvest of 23 in 2013 to 42 in 2017 (Table 137-1). During this period, the last five days of the season have accounted for an average of 49% of the harvest, with a range of 43–55%. Based on the harvest chronology, which increases substantially as the season gets into later September, this proposed action could result in a substantial increase in bull moose harvest.

BACKGROUND: Moose are relative newcomers to much of Unit 17A, with only about 35 animals being present along the eastern border in 1980. Since then, moose have continued to increase in population size and expand throughout Unit 17A and west into Unit 18. Minimum counts of moose in Unit 17A were conducted 14 times during the period of 1991–2011, revealing a steady increase in moose numbers over time, with 1,166 moose counted in March 2011. This was the last year minimum counts were conducted, and beginning in fall 2016, the Geospatial Population Estimator (GSPE) methodology replaced the minimum count for enumerating moose numbers in Unit 17A. In spring 2017, this survey technique produced an estimate of 2,388 animals. This is corrected for sightability (1.2 scf), so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437).

Two fall GSPEs were also conducted in recent years, one in fall 2016, and another in fall 2017. Both surveys were conducted in October without the benefit of snow on the ground so as to test the utility of conducting surveys without snow given the likelihood this will become the norm with our warming climate. We were able to acquire bull:cow ratios from these surveys for Unit

17A, with the results of 60 bulls:100 cows in fall 2016, and 77 bulls:100 cows in fall 2017. These data are subject to some level of bias associated with the higher likelihood of detecting a bull due to the presence of antlers, rather than a moose without antlers, when conducting surveys without snow cover.

A moose season was first opened in Unit 17A in fall 1997, with season dates of Aug. 20–Sept. 15, and a bag limit of one bull moose. However, to accommodate a growing moose population the hunting seasons and bag limits changed numerous times over the next 20 years:

- In 2001 the fall season was changed to Aug. 25–Sept. 20, giving hunters later season opportunity.
- In fall 2003 a “may be announced” 14 day winter hunt for an antlered bull moose was initiated for the period of Dec. 1–Jan. 31.
- In fall 2013 the winter season was extended to “up to 31 days”, an antlerless winter hunt was initiated, and the annual bag limit was increased to two moose.
- In fall 2014 a nonresident draw hunt was initiated.
- In fall 2015 the winter season dates were extended to allow for the “up to 31 day” season during the period of Dec. 1–the end of Feb.

All of these actions were adopted to accommodate a growing moose population that not only provided increasing harvest opportunity, but also needed to be held in check to remain within the constraints of the available habitat. The overall harvest in Unit 17A, including fall and winter hunts, has steadily increased over time, and reached a record high of 85 moose in RY16, with 20 of them being cows (Table 137-2).

Moose management in Unit 17A has been guided by the Unit 17A Moose Management Group, consisting of members from the Bristol Bay Federal Subsistence Regional Advisory Council, the Nushagak and Togiak Fish and Game advisory committees, the Togiak National Wildlife Refuge, and the Alaska Department of Fish and Game. This group produced a Unit 17A Moose Management Plan that went through several iterations during 1996–2013, with the 2013 plan being used as the guiding document today. This plan has goals and objectives for hunter opportunity, harvest allocation, habitat mapping and population monitoring. The population objective for Unit 17A listed in the plan is 800–1,200 moose.

During RY2010–2016, the mean annual moose harvest in Unit 17 was 311 moose.

Table 137-1. Chronology of harvest for fall resident moose hunts in Unit 17A, RY13-17.

Reg. Year	Harvest Periods						Total Harvest
	Aug. 25–31	Sept. 1–5	Sept. 6–10	Sept. 11–15	Sept. 16–20	Unk.	
2013	1	0	3	7	11	1	23
2014	2	1	3	11	17	2	36
2015	3	1	4	6	21	3	38
2016	0	6	8	12	20	0	46

2017	4	1	9	5	22	1	42
Total Harvest	10	9	27	41	91	7	185

Table 137-2. Fall and winter harvest combined for Unit 17A, RY13-17.

Reg. Year	Fall Resident Harvest	Fall Non-resident Harvest	Winter Bull Harvest	Winter Cow Harvest	Unknown Sex	Total Harvest
2013	23	NA	6	6	1	36
2014	36	4	4	12	1	57
2015	38	4	8	10	0	60
2016	46	10	9	20	0	85
2017	42	3	NA	NA	NA	NA
Total Harvest	185	21	27	48	2	238

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Although the most recent survey in spring 2017 shows a population above our population objectives, we are not certain of the population trend at this time. The minimum count surveys that were conducted through 2011 showed an increasing trend, but no surveys were completed in the following four years (2012–2015), and the change during 2016 from minimum counts to a GSPE does not allow for direct comparison of abundance over time. Based on the chronology of harvest that increases substantially as the season gets into later September, this proposed action could result in a substantial increase in bull harvest during the fall season. One consideration could be a more conservative shift in the season of just 2-3 days to see how this affects harvest and the bull:cow ratio, then incorporate those data into future management decisions. Although providing this additional harvest opportunity is consistent with the objectives of the 17A moose management plan, additional cow harvest during the antlerless season might be the most effective tool in lowering the productivity of this herd.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 138 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Lengthen the Unit 17A fall resident moose season by five days.

PROPOSED BY: Traditional Council of Togiak.

WHAT WOULD THE PROPOSAL DO? The proponent inadvertently used outdated regulatory language in their proposal that misrepresents the current seasons and bag limits; however, the intent of the proposed action listed in the proposal is valid. Therefore this proposal would lengthen the Unit 17A fall resident moose season managed under registration permit RM573 by five days, changing the season dates from the present Aug. 25–Sept. 20 to the proposed Aug. 25–Sept. 25.

WHAT ARE THE CURRENT REGULATIONS? The current regulations for the Unit 17A moose hunt allow resident hunters a bag limit of two moose per regulatory year, and nonresidents a bag limit of one moose per regulatory year as follows:

- Fall resident season:
 - Registration permit RM573,
 - Season dates of Aug. 25–Sept. 20,
 - A bag limit of one bull moose.
- Fall nonresident season:
 - Drawing permit DM570, up to 50 permits may be issued but currently only 20 are being allocated annually,
 - Season dates of Sept. 5–Sept. 15,
 - A bag limit of one bull moose with 50-inch antlers or antlers with four or more brow tines on at least one side.
- Winter resident season:
 - Two registration permits, RM575 for one antlered bull, and RM576 for one antlerless moose,
 - Season dates of “up to a 31 day season may be announced during December 1–last day of February” may be announced by emergency order,
 - A bag limit of two moose.
 - The winter hunt is opened by emergency order authority when good snow conditions exist for winter travel.
 - In the December 2017 winter hunt, a guideline harvest level of 30 antlerless moose and 20 antlered bulls was established.

There is a negative intensive management finding for moose in Unit 17A.

There is a positive customary and traditional use finding in Unit 17 with an amount reasonably necessary for subsistence of 100–150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted the shift in season dates would extend the hunting season further into the rut for bull moose making them more vulnerable to harvest. During the past five seasons, the fall moose harvest in Unit 17A has increased steadily, with a reported harvest of 23 in 2013 to 42 in 2017 (Table 138-1). During this period, the last five days of the season have accounted for an average of 49% of the harvest with a range of 43–55%. Based on the chronology of harvest, which increases substantially as the season gets into later September, this proposed action could result in a substantial increase in moose harvest.

BACKGROUND: Moose are relative newcomers to much of Unit 17A, with only about 35 animals being present along the eastern border in 1980. Since then, moose have continued to increase in population size and expand throughout Unit 17A and west into Unit 18. Minimum counts of moose in Unit 17A were conducted 14 times during the period of 1991–2011, revealing a steady increase in moose numbers over time, with 1,166 moose counted in March 2011. This was the last year minimum counts were conducted, and beginning in fall 2016, the Geospatial Population Estimator (GSPE) methodology replaced the minimum count for enumerating moose numbers in Unit 17A. In spring 2017, this survey technique produced an estimate of 2,388 animals. This is corrected for sightability (1.2 scf), so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437).

A moose season was first opened in Unit 17A in fall 1997, with season dates of Aug. 20–Sept. 15, and a bag limit of one bull moose. However, to accommodate a growing moose population the hunting seasons and bag limits changed numerous times over the next 20 years:

- In 2001 the fall season was changed to Aug. 25–Sept. 20, giving hunters more late season opportunity.
- In fall 2003 a “may be announced” 14 day winter hunt for an antlered bull moose was initiated for the period of Dec. 1–Jan. 31.
- In fall 2013 the winter season was extended to “up to 31 days”, an antlerless winter hunt was initiated, and the annual bag limit was increased to two moose.
- In fall 2014 a nonresident draw hunt was initiated.
- In fall 2015 the winter season dates were extended to allow for the “up to 31 day” season during the period of Dec. 1–the end of Feb.

All of these actions were adopted to accommodate a growing moose population that not only provided increasing harvest opportunity, but also needed to be held in check to remain within the constraints of the available habitat. The overall harvest in Unit 17A, including fall and winter hunts, has steadily increased over time, and reached a record high of 85 moose in RY16, with 20 of them being cows.

Moose management in Unit 17A has been guided by the Unit 17A Moose Management Group, consisting of members from the Bristol Bay Federal Subsistence Regional Advisory Council, the Nushagak and Togiak Fish and Game advisory committees, the Togiak National Wildlife Refuge, and the Alaska Department of Fish and Game. This group produced a Unit 17A Moose Management Plan that went through several iterations during 1996–2013, with the 2013 plan being used as the guiding document today. This plan has goals and objectives for hunter opportunity, harvest allocation, habitat mapping and population monitoring. The population objective for Unit 17A listed in the plan is 800–1,200 moose.

During RY2010–2016, the mean annual moose harvest in Unit 17 was 311 moose.

Table 138-1. Chronology of harvest for fall resident moose hunts in Unit 17A, RY13-17.

	Harvest Periods
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Reg. Year	Aug. 25–31	Sept. 1–5	Sept. 6–10	Sept. 11–15	Sept. 16–20	Unk.	Total Harvest
2013	1	0	3	7	11	1	23
2014	2	1	3	11	17	2	36
2015	3	1	4	6	21	3	38
2016	0	6	8	12	20	0	46
2017	4	1	9	5	22	1	42
Total Harvest	10	9	27	41	91	7	185

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Although the most recent survey in spring 2017 shows a population above our population objectives, we are not certain of the population trend at this time. The minimum count surveys that were conducted through 2011 showed an increasing trend, but no surveys were completed in the following four years (2012–2015), and the change during 2016 from minimum counts to a GSPE does not allow for direct comparison of population estimates. Based on the recent increasing harvest chronology, which increases substantially as the season gets into later September, this proposed action could result in a substantial increase in moose harvest.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 139 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Lengthen the Unit 17A fall nonresident drawing permit hunt by 10 days.

PROPOSED BY: Aaron Bloomquist.

WHAT WOULD THE PROPOSAL DO? This proposal would lengthen the Unit 17A fall nonresident moose season managed under drawing permit DM570 by 10 days, changing the season dates from the present Sept. 5–Sept. 15 to the proposed Sept. 1–Sept. 20.

WHAT ARE THE CURRENT REGULATIONS? The Unit 17A fall nonresident moose season managed under drawing permit DM570 begins on September 5 and ends on September 15. Although up to 50 permits could be issued, only 20 permits per year have been issued during each of the four years of this hunt. The bag limit is for one bull moose with 50-inch antlers or four or more brow tines on at least one side. Nonresident orientation is required, and there is no aircraft use on, or within 2 miles of specific rivers and lakes.

There is a positive customary and traditional use finding in Unit 17 with an amount reasonably necessary for subsistence of 100 – 150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted the addition of 10 days to the nonresident season and most importantly the extension to September 20 would extend the hunting season further into the rut for bull moose making them more vulnerable to harvest. During the past five seasons, the fall resident moose harvest in Unit 17A has increased steadily, with a reported harvest of 23 in 2013 to 42 in 2017 (Table 139-1). During this period, the last five days of the season have accounted for an average of 49% of the harvest, with a range of 43–55%. Based on this chronology of harvest that increases substantially as the season gets into later September, this proposed action could result in a substantial increase in moose harvest by nonresident hunters during the DM570 hunt (Table 139-2).

Table 139-1. Chronology of harvest for fall resident 25-day moose hunt in Unit 17A, RY13-17.

Reg. Year	Harvest Periods						Total Harvest
	Aug. 25–31	Sept. 1–5	Sept. 6–10	Sept. 11–15	Sept. 16–20	Unk.	
2013	1	0	3	7	11	1	23
2014	2	1	3	11	17	2	36
2015	3	1	4	6	21	3	38
2016	0	6	8	12	20	0	46
2017	4	1	9	5	22	1	42
Total Harvest	10	9	27	41	91	7	185

Table 139-2. DM570 permit history in Unit 17A, RY14-17.

Reg. Year	Number of Applicants	Number of Permits issued	Number who Hunted	Number who Harvested
2014	13	13	8	4
2015	17	17	16	4
2016	33	20	18	10
2017	97	20	10	3

BACKGROUND: Moose are relative newcomers to much of Unit 17A, with only about 35 animals being present along the eastern border in 1980. Since then, moose have continued to increase in population size and expand throughout Unit 17A and west into Unit 18. Minimum counts of moose in Unit 17A were conducted 14 times during the period of 1991–2011, revealing a steady increase in moose numbers over time, with 1,166 moose counted in March 2011. This was the last year minimum counts were conducted, and beginning in fall 2016, the Geospatial Population Estimator (GSPE) methodology replaced the minimum count for enumerating moose numbers in Unit 17A. In spring 2017, this survey technique produced an estimate of 2,388

animals. This is corrected for sightability (1.2 scf), so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437).

A moose season was first opened in Unit 17A in fall 1997, with season dates of Aug. 20–Sept. 15, and a bag limit of one bull moose. However, to accommodate a growing moose population the hunting seasons and bag limits changed numerous times over the next 20 years:

- In 2001 the fall season was changed to Aug. 25–Sept. 20 giving hunters a later season opportunity.
- In fall 2003 a “may be announced” 14 day winter hunt for an antlered bull moose was initiated for the period of Dec. 1–Jan. 31.
- In fall 2013 the winter season was extended to “up to 31 days”, an antlerless winter hunt was initiated, and the annual bag limit was increased to two moose.
- In fall 2014 a nonresident draw hunt was initiated.
- In fall 2015 the winter season dates were extended to allow for the “up to 31 day” season during the period of Dec. 1–the end of Feb.

All of these actions were adopted to accommodate a growing moose population that not only provided increasing harvest opportunity, but also needed to be held in check to remain within the constraints of the available habitat. The overall harvest in Unit 17A, including fall and winter hunts, has steadily increased over time, and reached a record high of 85 moose in RY16, with 20 of them being cows.

Moose management in Unit 17A has been guided by the Unit 17A Moose Management Group, consisting of members from the Bristol Bay Federal Subsistence Regional Advisory Council, the Nushagak and Togiak Fish and Game advisory committees, the Togiak National Wildlife Refuge, and the Alaska Department of Fish and Game. This group produced a Unit 17A Moose Management Plan that went through several iterations during 1996–2013, with the 2013 plan being used as the guiding document today. This plan has goals and objectives for hunter opportunity, harvest allocation, habitat mapping and population monitoring. The population objective for Unit 17A listed in the plan is 800–1,200 moose.

During RY2010–2016, the mean annual moose harvest in Unit 17 was 311 moose.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The current season dates for the nonresident season were intentionally limited in length to avoid conflicts with resident hunters.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 140 – 5 AAC 85.045. Hunting seasons and bag limits for moose. Open a guide-required, nonresident registration permit hunt for moose in Unit 17A.

PROPOSED BY: Aaron Bloomquist.

WHAT WOULD THE PROPOSAL DO? This proposal seeks to open a guide-required registration permit moose hunt for nonresidents in Unit 17A. Only guided hunters could acquire these permits and there would initially be 10 permits available. These registration permits would be taken out of the permits currently allocated to the Unit 17A nonresident draw hunt, resulting in fewer permits available to nonresident hunters in the DM570 draw hunt.

WHAT ARE THE CURRENT REGULATIONS? Present season dates for the DM570 draw permit hunt are September 5–September 15. Although up to 50 permits can be issued, 20 permits are currently available and a guide is not required. The bag limit is for one bull moose with 50-inch antlers or four or more brow tines on at least one side. Nonresident orientation is required, and there is no aircraft use on, or within two miles specific rivers and lakes.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The number of nonresident drawing permits made available for the DM570 hunt would be reduced as some of these permits would be allocated as registration permits. Hunters who prefer to hunt without a guide would have a lower chance of being drawn for a permit with the smaller pool of available permits.

BACKGROUND: A nonresident drawing hunt for moose in Unit 17A (DM570) was adopted by the board in 2013, with fall 2014 being the first year of that hunt. The impetus behind the nonresident hunt was abundant harvest opportunity provided by this growing moose population, and objectives within the moose management plan that provide for the nonresident opportunity when the moose population exceeds 1,000 animals and is at a stable or increasing trend. The most recent survey for Unit 17A in spring 2017 produced an estimate of 2,388 animals. This is corrected for sightability (1.2 scf), so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437). This estimate is well above our population objective of 800–1,200 moose for the unit. Although we do not have population trend data for the past five years, indications related to productivity, calf survival, and calf recruitment are that this moose population is still growing.

The DM570 hunt has only been in place for four seasons. Each year this hunt gets more popular as people learn of its availability. In the first year of this hunt (fall 2014), only 13 hunters applied for the 20 permits, but that number increased to 97 by 2017 (Table 140-1).

Table 140-1. Draw moose hunt DM570 permit history in Unit 17A, RY14-RY17.

Reg. Year	Number of Applicants	Number of Permits issued	Number who Hunted	Number who Harvested
2014	13	13	8	4
2015	17	17	?	4
2016	33	20	18	10
2017	97	20	10	3

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. This is an allocation issue that takes permits out of the draw allocation and puts them into a registration permit pool requiring nonresident hunters to have a guide.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 141 – 5 AAC 96.069. Special provisions for moose drawing permit hunts.
Allocate a portion of the nonresident drawing permits for moose in Unit 17A to guided hunters.

PROPOSED BY: Aaron Bloomquist.

WHAT WOULD THE PROPOSAL DO? This proposal seeks to allocate a portion of the DM570 nonresident drawing permits to guided hunters. The proponent recommends a maximum of 50% of the permits would go to guided hunters, but at this time there are only four guided moose hunts allowed under the Togiak National Wildlife Refuge concession which would equal 20% of the available permits.

WHAT ARE THE CURRENT REGULATIONS? Current season dates for the nonresident DM570 draw permit hunt are Sept. 5–Sept. 15. Although up to 50 permits could be issued, only 20 permits per year have been issued during each of the four years of this hunt. The bag limit is for one bull moose with 50-inch antlers or four or more brow tines on at least one side. A guide is not required but nonresident orientation is required; and there is no aircraft use on, or within two miles of specific rivers and lakes.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The number of nonresident drawing permits available to unguided hunters would be reduced as some of these permits would be allocated to guide-required hunts. Hunters who prefer to hunt without a guide would have a lower chance of getting a permit with the smaller pool of available permits.

BACKGROUND: A nonresident drawing hunt for moose in Unit 17A (DM570) was adopted by the board in 2013 with fall 2014 being the first year of that hunt. The impetus behind the nonresident hunt was abundant harvest opportunity provided by this growing moose population, and objectives within the moose management plan that provide for the nonresident opportunity when the moose population exceeds 1,000 animals and is at a stable or increasing trend. The most recent survey for Unit 17A in spring 2017 produced an estimate of 2,388 animals. This is corrected for sightability (1.2 scf) so does not contain confidence intervals around the estimate. However, the uncorrected estimate was 1,990 moose (± 437). This estimate is well above our population objective of 800–1,200 moose for the unit. Although we do not have trend data for the past 5 years, indications are that this moose population is still growing.

The DM570 hunt has only been in place for four seasons. Each year this hunt gets more popular as people learn of its availability. In the first year of this hunt (fall 2014), only 13 hunters applied for the 20 permits, but that number increased to 97 by 2017 (Table 141-1).

Table 141-1. Draw moose hunt DM570 permit history, RY14-RY17.

Reg. Year	Number of Applicants	Number of Permits issued	Number who Hunted	Number who Harvested
2014	13	13	8	4
2015	17	17	?	4
2016	33	20	18	10
2017	97	20	10	3

DEPARTMENT COMMENTS: The department is **NEUTRAL** this proposal. This is an allocation issue where up to 50% of the nonresident draw permits for DM570 would be allocated to guides. Depending on the outcome of Proposal 140, the board may want to discuss how this new guided component of the drawing hunt will fit with the proposed registration permit in Proposal 140.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department

PROPOSAL 142– 5 AAC 85.045(a)(15). Hunting seasons and bag limits for moose. Shift the fall hunting season dates for moose in a portion of Unit 17C to start and end five days later than the current season dates.

PROPOSED BY: Kenneth Nukwak.

WHAT WOULD THE PROPOSAL DO? This proposal would shift the season dates for the fall resident moose hunt in that portion of Unit 17C, west of the Weary River by five days. The current season dates of Aug. 20–Sept. 15 would be replaced with the proposed season dates of Aug. 25–Sept. 20.

WHAT ARE THE CURRENT REGULATIONS?

- The current season dates for the fall resident moose hunting season managed under the RM583 registration permit for Unit 17C are Aug. 20–Sept. 15, with a bag limit of one bull moose.
- The general season (GM000) for Unit 17C runs from Sept. 1–Sept. 15. The harvest is restricted to antlered bulls that meet the spike-fork, 50 inch, or three or more brow tines on at least one side regulation.
- The winter registration hunt (RM585) for Unit 17C is open Dec. 1–31, with a bag limit of one antlered bull moose.
- There is no nonresident season for moose in Unit 17C.

There is a positive customary and traditional use finding in Unit 17 with an amount reasonably necessary for subsistence of 100-150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted the shift to a later season would extend the hunting season deeper into the rut for bull moose, making them more vulnerable to harvest (Table 142-1), and could substantially increase the level of harvest in this area. The hunting pressure in this portion of Unit 17C could also increase due to the attractiveness of the later season, and hunters from other areas, particularly nearby Dillingham, may decide to take advantage of this later season after the remainder of Unit 17C closes on September 15. The initial data we have from a moose calf survival study in Units 17B&C since spring 2017 suggests we have a moose population subject to high neonate predation that is limiting recruitment of young animals into the adult age classes. This proposed action could lead to an unsustainable harvest in this portion of the unit.

Table 142-1. Chronology of harvest for fall resident moose hunt in Unit 17B&C, RY13-17.

Reg. Year	Harvest Periods						Total Harvest
	Aug. 20–26	Aug. 27–31	Sept. 1–5	Sept. 6–10	Sept. 11–15	Unk.	
2013	64	12	11	28	44	3	159
2014	51	19	9	29	33	7	148
2015	57	16	11	17	59	3	163
2016	43	23	29	47	42	7	191
2017	50	19	26	32	44	2	173
Total Harvest	265	89	86	153	222	22	837

BACKGROUND: Unit 17C consists of 5,873 square miles and the portion west of the Weary River that is subject to this proposed season change is approximately 900 square miles or about 15% of the unit. Moose in Unit 17C are managed at the game management unit level, with consistent fall season dates across the entire unit. The fall resident moose season for Unit 17C has ended by Sept. 15 or earlier since 1981.

Moose abundance estimates were conducted sporadically in Unit 17C until the late 1990s; since then the abundance estimates have been conducted on average once every five years. Four estimates conducted during the period of 1998–2014 show a relatively stable population of moose in this unit. Although the Geospatial Population Estimator (GSPE) surveys were designed and implemented to estimate abundance on the unit scale, we did excise a portion of the survey area most representative of that area west of the Weary and ran a separate analysis for this sub-area. The data are based on a small sample size of GSPE units, and there is no evidence that the moose abundance in the portion of Unit 17C west of the Weary River has been increasing.

Fall composition surveys in this unit have been almost non-existent due to inadequate snow cover prior to antler drop, but in fall 2016 the department conducted surveys in a variety of habitats and trend areas that were established in the unit in the late 1980s. The results revealed low bull:100 cow and calf:100 cow ratios in several densely populated areas that contained a

large proportion of the moose observed, while the overall numbers for Unit 17C were 22 bulls and 16 calves:100 cows.

The fall moose harvest in Unit 17C has averaged 152 moose during the past eight seasons (RY10–RY17), with a range of 132–178. Separating out the harvest for the area west of the Weary River is difficult since the harvest coding units are not specific to this area. However, since nearly all effort and harvest for this area comes from Manokotak residents, we can look at the Manokotak harvest as a proxy for the entire harvest in this area. During these same eight seasons, an average of four moose per year were reported to have been taken by hunters with a Manokotak address, all likely from this area west of and including the area immediately adjacent to either side of the Weary River.

In spring 2017, the department began a moose calf mortality study in Units 17B&C to assess the productivity of moose and survival and recruitment of calves into the adult population. Twinning surveys conducted in spring of 2015 and 2016 revealed a high percentage of cow moose without calves during and after the peak of calving: this suggested some issue with either productivity or calf survival. The fall 2016 composition surveys that yielded low calf:100 cow ratios in some high density moose areas further suggested that we had a problem with recruiting calves to the six month age class, and ultimately bull moose available for breeding and harvest. To begin to understand this moose population, the department collared 35 adult cow moose between Units 17B and 17C, 34 of which were pregnant and 31 were seen with a calf(s). The twinning rate was 65%, but calf survival was very low and only 6 calves remained by November of 2017, which included one set of twins. The ratio of calves:100 cows from this sample was 19:100. Although this is only a single year of data, the combination of these data, along with the composition survey from fall 2016, and the 2015 and 2016 spring twinning surveys all suggest we have high neonate mortality rates that are impacting our recruitment of calves into the adult population. The department plans to expand this multi-year assessment in spring 2018 to include portions of the area near the Weary River referenced in this proposal.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal and recommends that no changes be made to the Unit 17C moose hunting season. Our data on this moose population suggests we are experiencing low calf survival and could be experiencing a trend in this metric that will likely affect our recruitment of young animals into the adult age classes in future years. Our understanding of moose population dynamics in Unit 17C is not sufficient for us to support this proposal, which could result in an increase in harvest west of the Weary River that could be unsustainable at this time.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 143– 5 AAC 85.045(a)(15). Hunting seasons and bag limits for moose. Open the resident winter season for moose in a portion of Unit 17C by emergency order.

PROPOSED BY: Kenneth Nukwak

WHAT WOULD THE PROPOSAL DO? This proposal would change the season dates for the winter registration moose hunt (RM585) in that portion of Unit 17C west of the Weary River from the current season of Dec. 1–Dec. 31, to Dec. 1–last day of February, with a season of up to 31 days to be announced by emergency order.

WHAT ARE THE CURRENT REGULATIONS? The current regulations for the winter moose hunting season in Units 17B and 17C are Dec. 1–Dec. 31. The bag limit is one antlered bull.

There is a positive customary and traditional use finding in Unit 17 with an amount necessary for subsistence of 100-150 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted the winter moose season in this area could be shifted strategically to provide the greatest opportunity for moose harvest during the winter hunt. This would likely increase hunting efficiency and lead to an increased level of moose harvest that could be unsustainable. The proximity of the area west of the Weary River to Dillingham, and the extreme popularity of the winter hunt would likely lead to intense hunting pressure by hunters who were unsuccessful in the Dec. 1–Dec. 31 season in the remainder of Unit 17C, or those who choose to target this hunt area because of the more advantageous season dates.

BACKGROUND: Unit 17C consists of 5,873 square miles and the portion west of the Weary River that is subject to this proposed season change represents just a small portion of this area. Moose in Unit 17C are managed at the game management unit level, with consistent winter season dates across the entire unit. Portions of western 17C and the area referenced in this proposal were initially closed to the winter hunt until RY2008 when the department believed the moose population was abundant enough to allow for a winter hunt.

Moose abundance estimates were conducted sporadically in Unit 17C until the late 1990s, since then the abundance estimates have been conducted on average once every five years. Four estimates conducted during the period of 1998–2014 show a relatively stable population of moose in this unit. Although these abundance estimates were designed and implemented to estimate abundance on the unit scale, we did excise the area west of the Weary and ran a separate analysis for this sub-area. The data is based on a small sample size of units, and there is no evidence that the moose abundance in the portion of Unit 17C west of the Weary River has been increasing.

Fall composition surveys in this unit have been almost non-existent due to inadequate snow cover prior to antler drop, but in fall 2016 the department conducted surveys in a variety of habitats and trend areas that were established in the late 1980s in the unit. The results revealed low bull:100 cow and calf:100 cow ratios in several densely populated areas that contained a large proportion of the moose observed, while the overall numbers for Unit 17C were 22 bulls and 16 calves:100 cows.

The winter moose harvest in Unit 17C has averaged 35 moose during the past seven seasons (RY10–RY16), with a range of 17–58. Separating out the harvest for the area west of the Weary River is difficult since the harvest coding units are not specific to this area.

In spring 2017, the department began a moose calf mortality study in Units 17B&C to assess the productivity of moose and survival and recruitment of calves into the adult population. Twinning surveys conducted in spring of 2015 and 2016 revealed a high percentage of cow moose without calves during and after the peak of calving that suggested some issue with either productivity or

calf survival. The fall 2016 composition surveys that yielded low calf:100 cow ratios in some high density moose areas further suggested that we had a problem with recruiting calves to the six month age class, and ultimately bull moose available for breeding and harvest. To begin to understand this moose population, the department collared 35 adult cow moose between Units 17B and 17C, 34 of which were pregnant and 31 were seen with a calf(s). The twinning rate was 65%, but calf survival was very low and only 6 calves remained by November of 2017, which included one set of twins. The ratio of calves:100 cows from this sample was 19:100. Although this is only a single year of data, the combination of this data, along with the composition survey from fall 2016, and the 2015 and 2016 spring twinning surveys all suggest we have high neonate mortality rates that are impacting our recruitment of calves into the adult population. The department plans to expand this multi-year assessment in spring 2018 to include portions of the area near the Weary River referenced in this proposal.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal and recommends that no changes be made to this season. The proponent references the Unit 17A winter hunt season dates and would like to see this portion of Unit 17C have a similarly orchestrated season. However Unit 17A has a growing moose population and one that is subject to hunting pressure almost exclusively from the community of Togiak, whereas the area west of the Weary River is vulnerable to intense hunting pressure from several nearby villages including Dillingham. Our data on the broader Unit 17C moose population suggests we are experiencing low calf survival and could be experiencing a trend in this metric that is going to affect our recruitment of young animals into the adult age classes in future years, and this area could well be in the same situation.

The department does not have the information it needs to support this revision. While the reporting requirements of the permit hunt allow us to track harvest, we are lacking basic moose population information that would allow us to estimate some level of allowable harvest for this later season hunt, which could easily result in an increase and unsustainable level of harvest. The department has the emergency order authority to extend the season, but has not used it when requested because of the potential for overharvest.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 144– 5 AAC 92.540(5)(A)(ii). Controlled Use Areas. Allow the use of motorized vehicles for moose hunting in the Upper Mulchatna Controlled Use Area (UMCUA).

PROPOSED BY: Richard King.

WHAT WOULD THE PROPOSAL DO? This proposal would allow the use of motorized vehicles for moose hunting in the Upper Mulchatna Controlled Use Area between August 1 and November 1.

WHAT ARE THE CURRENT REGULATIONS? The Upper Mulchatna Controlled Use Area is closed to the use of any motorized vehicle for hunting big game, including the transportation of big game hunters, their hunting gear, or parts of big game from August 1

through November 1, except that the use of an aircraft or boat is not prohibited, and a motorized vehicle in a legally permitted hunting camp is not prohibited. All of Unit 17B lies within this controlled use area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposed action would allow increased access for moose hunting from the river corridors, lakes, landing strips and villages within the controlled use area. Local hunters would be best situated to take advantage of this opportunity, but commercial operators could likely use their camps as the base of operations for motorized vehicle use. The expanded range of hunters through the use of motorized vehicles could result in user conflicts, habitat disturbance, as well as local depletions of moose. There could be some enforcement issues associated with hunters taking other big game species such as caribou, bears, or wolves while using motorized vehicles for access.

BACKGROUND: The Upper Mulchatna Controlled Use Area (Figure 144-1) was established through board action in 1990. Both the department and the Nushagak Fish and Game Advisory Committee (NAC) submitted proposals requesting this action. Concerns centered on the dramatic increase in hunting activity in Unit 17B precipitated by the increase of the Mulchatna caribou herd, leading to concerns regarding habitat destruction, user conflicts, and overharvest of moose along the Mulchatna River. In particular, the NAC was concerned that commercial operators and their clientele would compete with local subsistence hunters for moose in this area. During this period other areas such as the Nelchina Basin were experiencing concerns with off road vehicle (ORV) activity and many residents of Bristol Bay wanted to take preventative measures to avoid similar issues in portions of Unit 17.

A number of changes since the 1990s may lessen the concerns regarding ORV use in this area. The decline of the Mulchatna caribou herd resulted in the closing of the nonresident season in 2008 and sharply curtailed the interest by Alaska residents to pursue caribou in Unit 17B due to the low density of animals on the landscape. Moose hunting has also changed in that user conflicts and competition for moose in Unit 17B led to changes in the permit hunt structure for nonresident hunters. Rather than just a harvest ticket, the river corridors of the Mulchatna and Nushagak rivers in Unit 17B now require a registration permit for nonresident hunters with a limit of 75 permits. This lessens the potential pressure for nonresident moose hunting along the rivers where local residents focus their efforts for their subsistence moose harvest. However, outside the two mile river corridors, nonresidents can hunt with a general season moose harvest ticket with no restrictions on the number issued.

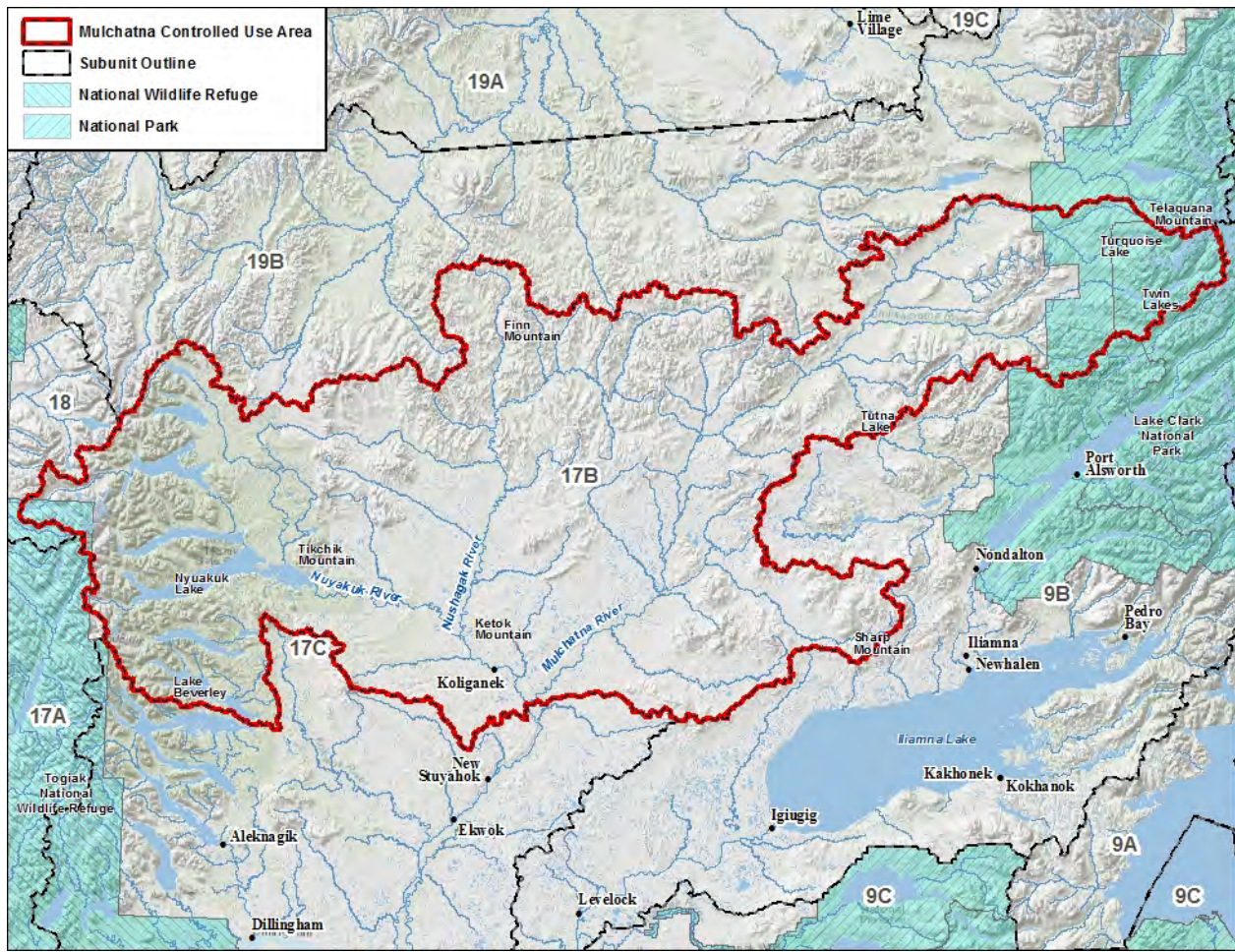


Figure 144-1. Upper Mulchatna Controlled Use Area in Unit 17.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Moose hunting in Unit 17B is very popular not only along the river corridors, but in drop-camps associated with lakes and in some cases airstrips on tundra or ridgeline strips. Both commercial operators and locals alike would probably take advantage of this proposed action should it pass. This could lead to some of the same concerns that were voiced in the early 1990s: local depletions of moose, user conflict between commercial operators and local hunters, and habitat degradation, though likely at a lesser scale due to this change being specific to moose hunting.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 145– 5 AAC 85.025. Hunting seasons and bag limits for caribou. Open a nonresident registration hunt for bull caribou in Unit 17 and the portion of Unit 9 that lies within the range of the Mulchatna caribou.

PROPOSED BY: Aaron Bloomquist.

WHAT WOULD THE PROPOSAL DO? This proposal would allow for a nonresident registration permit hunt for bull caribou in Unit 17 and Units 9A, 9B, and a portion of Unit 9C during September 1–30. Up to 200 permits may be issued, although the proponent recommends only 50 permits be issued initially.

WHAT ARE THE CURRENT REGULATIONS?

- The Mulchatna caribou hunt is restricted to residents of Alaska and is managed under a single registration permit (RC503) that encompasses the entire MCH range, and includes portions of Units 17(A) and 17(C) as well as all of 17(B), Unit 18, Units 19(A), 19(B), 9(A), 9(B), and a portion of 9(C). There is a positive C&T finding for the Mulchatna herd with an ANS of 2,100–2,400.
- Season dates vary from August 1–March 31 to August 1–March 15.
- The bag limit across this range is two caribou.
- There is currently no nonresident caribou season in any portion of the Mulchatna caribou range.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow for a limited harvest of bull caribou by nonresident hunters across portions of the Mulchatna caribou range. The proponent asks for an upper limit of 200 permits, but also requests that initially the department issue only 50 permits. Although this recommendation is for a relatively few caribou, the harvest of any additional bulls will work against the ability of managers to see this herd reach objectives for bull:cow ratios which is an important threshold within the Mulchatna caribou herd intensive management plan. Additionally, the annual reported harvest on this herd is already far below the amount reasonably necessary for subsistence (ANS), so any harvest by nonresident hunters could affect the ability of Alaska resident hunters to meet their subsistence needs.

BACKGROUND: The Mulchatna caribou herd has gone through dramatic changes in density over the past 20 years, with an estimated population of 200,000 animals in 1996 to approximately 27,000 today. During this period management of this herd changed too, with season dates during the high cycle extending to April 15, but shortened to March 15 in 2006 as this herd was declining to fewer than 50,000 animals. The earlier season closure date was initiated to curtail spring harvest at a time when the harvestable surplus was declining and concern that high springtime harvests could lead to a further decline in caribou and inhibit the recovery of this population. As part of this conservative shift in management, the nonresident season which was in place up through 2008 was closed.

In 2015 with things looking more positive for this herd, the season for residents was lengthened again in portions of the Mulchatna range to March 31 to accommodate more harvest opportunity since the harvest was well below the harvestable surplus. Decision making factors such as an increasing trend in abundance estimates, increasing bull:100 cow ratios, and positive signs with the reproductive indices such as pregnancy rates of two and three year old females all suggested this herd was doing well and capable of accommodating more harvest opportunity.

In the past two years however, we have seen indications that this herd may still be struggling to rebound. This herd has experienced two consecutive years of calf:100 cow ratios in the lower 20s, well below our management objective of 30 calves:100 cows. A calf mortality study that

was initiated in spring 2017 to assess predation on and survival of neonates indicated high mortality of caribou calves in both the northern and southern calving grounds. The northern calving group had a mortality rate of 84% by late summer and the southern calving group was at about 60% during this same period. Although these data are for only a single year, they may explain the low calf-to-cow ratios seen during the fall composition counts the past two years. Additionally, the bull:100 cow ratio that had been increasing steadily since 2005 declined from 39 bulls:100 cows in 2016 to 32 bulls:100 cows in 2017, again falling short of our management objective of 35 bulls:100 cows.

An active intensive management (IM) program is in place in the Mulchatna range, aimed at removing wolves to increase caribou calf survival and recruitment. This IM effort has been in place since 2011, and is being revised to increase the area where wolves can be removed by permitted pilots. Presently the Mulchatna herd is below the IM objectives for abundance, bull:100 cow ratios, and the calf:100 cow ratios. The harvest (330 caribou in RY16) is also well below the amount reasonably necessary for subsistence (2,100–2,400), although harvest has been increasing each of the past three years. Although the reported harvest is well below the estimated harvestable surplus of approximately 1,200 animals, the low harvest is due more to lack of access to caribou than it is to absence of caribou. Lack of snow has led to poor winter travel conditions and has hindered snowmachine travel which is essential for hunters to access caribou herds.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. However, there are a number of factors that should be considered when addressing this proposed action. There is an active intensive management program within portions of the Mulchatna caribou range, aimed at increasing calf survival and enhance population growth. The Mulchatna caribou herd is below IM objectives for abundance, bull:100 cow ratios, calf:100 cow ratios, and the harvest as well as the harvestable surplus are both well below the amount reasonably necessary for subsistence.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 146– 5 AAC 85.025. Hunting seasons and bag limits for caribou. Open a guide-required nonresident drawing hunt for caribou in Unit 17B, and include a tag fee to help generate money for the State of Alaska.

PROPOSED BY: Thomas Dvorak

WHAT WOULD THE PROPOSAL DO? This proposal would provide an allocation of 14 nonresident drawing permits for bull caribou in Unit 17B with a required tag fee of \$1,000.00 per tag.

WHAT ARE THE CURRENT REGULATIONS? There is currently no nonresident caribou season in Unit 17B. Hunting opportunity for residents is as follows:

- The Mulchatna caribou hunt is restricted to residents of Alaska and is managed almost entirely under a single registration permit (RC503) that encompasses the entire MCH range, and includes portions of Units 17A and 17C as well as all of 17B, Unit 18, Units 19A, 19B, 9A, 9B, and a portion of 9C. There is a positive C&T finding for Mulchatna caribou, and an ANS of 2,100–2,400.
- Season dates vary from August 1–March 31 to August 1–March 15.
- The bag limit across this range is two caribou.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow for a limited harvest of bull caribou by nonresident hunters who are willing to pay \$1,000 per tag.

BACKGROUND: The Mulchatna caribou herd has gone through dramatic changes in density over the past 20 years, with an estimated population of 200,000 animals in 1996 to approximately 27,000 today. During this period management of this herd changed too, with season dates during the high cycle extending to April 15, but shortened to March 15 in 2006 as this herd was declining to fewer than 50,000 animals. The earlier season closure date was initiated to curtail spring harvest at a time when the harvestable surplus was declining and concern that high springtime harvests could lead to a further decline in caribou and inhibit the recovery of this population. As part of this conservative shift in management, the nonresident season which was in place up through 2008 was closed.

In 2015 in response to an increasing trend in several important parameters for this herd, the season for residents was lengthened again to March 31 in portions of the Mulchatna range to accommodate more harvest opportunity since the harvest was well below the harvestable surplus. Factors guiding the decision were an increasing trend in abundance estimates, increasing bull:100 cow ratios, and positive signs with the reproductive indices, such as pregnancy rates of two and three year old females: all this suggested this herd was doing well and capable of accommodating more harvest opportunity.

In the past two years however, we have seen indications that this herd may still be struggling to rebound. This herd has experienced two consecutive years of calf:100 cow ratios in the lower 20s – below our management objective of 30 calves:100 cows. A calf mortality study initiated in spring 2017 to assess predation on and survival of neonates indicated high mortality of caribou calves in both the northern and southern calving grounds. The northern calving group had a mortality rate of 84% by late summer and the southern calving group was at about 60% during this same period. Although these data are for only a single year, they may explain the low calf-to-cow ratios seen during the fall composition counts. Additionally, the bull:100 cow ratio that had been increasing steadily since 2005 declined from 39 bulls:100 cows in 2016 to 32 bulls:100 cows in 2017, again falling short of our management objective of 35 bulls:100 cows.

An active intensive management (IM) program is in place in the Mulchatna range, aimed at removing wolves to increase caribou calf survival and recruitment. This IM effort has been in place since 2011, and is being revised to increase the area where wolves can be removed by permitted pilots. Presently the Mulchatna herd is below the IM objectives for abundance, bull:100 cow ratios, and the calf:100 cow ratios. The harvest (330 caribou in RY16) is also well

below the amount reasonably necessary for subsistence (2,100–2,400), although it has been increasing each of the past three years. Although the reported harvest is well below the estimated harvestable surplus of approximately 1,200 animals, the low harvest is due more to lack of access to caribou than it is to absence of caribou. Lack of snow has led to poor winter travel conditions and has hindered snowmachine travel, which is essential for hunters to access caribou herds.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal, and this proposal requests a special tag fee for caribou that the board does not have authority to address. However, there are a number of factors that should be considered when addressing this proposed action. There is an active intensive management program within portions of the Mulchatna caribou range, aimed at increasing calf survival and enhancing population growth. The Mulchatna caribou herd is below IM objectives for abundance, bull:100 cow ratios, calf:100 cow ratios, and the harvest as well as the harvestable surplus is well below the amount reasonably necessary for subsistence.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 147– 5 AAC 85.025. Hunting seasons and bag limits for caribou. Open a nonresident draw hunt for bull caribou in Units 18 and 19.

PROPOSED BY: Aaron Bloomquist.

WHAT WOULD THE PROPOSAL DO? This proposal would allow for a nonresident draw hunt for bull caribou in Units 18 and 19A and 19B. The proponent suggests 50 permits are made available, with the department issuing only 20 initially.

WHAT ARE THE CURRENT REGULATIONS?

- The Mulchatna caribou hunt is restricted to residents of Alaska and is managed almost entirely under a single registration permit (RC503) that encompasses the entire MCH range, and includes portions of Units 17A and 17C as well as all of 17B, Unit 18, Units 19A, 19B, 9A, 9B, and a portion of 9C. There is a positive C&T finding for the Mulchatna herd, and an ANS of 2,100–2,400 caribou.
- Season dates vary from August 1–March 31 to August 1–March 15.
- The bag limit across this range is two caribou.
- There is currently not a nonresident caribou season in any portion of the Mulchatna caribou range; however there is a nonresident general season harvest ticket hunt in Units 19C and 19D with a bag limit of one bull and season dates of August 10–September 20.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow for a limited harvest of bull caribou by nonresident hunters across portions of the Mulchatna caribou range. Although the proponent asks for an upper limit of 50 permits, he also requests that initially the department issue only 20 of these. Although this recommendation

is for a relatively few caribou, the potential harvest of any additional bulls will work against the ability of managers to see this herd reach objectives for bull:cow ratios, which is an important threshold within the IM plan. Additionally, the ability of local hunters to meet their subsistence needs is already compromised by their inability to access caribou herds, and the removal of additional bulls could remove animals that otherwise might have been harvested locally.

BACKGROUND: The Mulchatna caribou herd has gone through dramatic changes in density over the past 20 years, with an estimated population of 200,000 animals in 1996 to approximately 27,000 today. During this period management of this herd changed too, with season dates during the high cycle extending to April 15, but shortened to March 15 in 2006 as this herd was declining to fewer than 50,000 animals. The earlier season closure date was initiated to curtail spring harvest at a time when the harvestable surplus was declining and concern that high springtime harvests could lead to a further decline in caribou and inhibit the recovery of this population. As part of this conservative shift in management, the nonresident season, which had been in place up through 2008, was closed.

In 2015 with things looking more positive for this herd, the season for residents was lengthened again in portions of the Mulchatna range to March 31 to accommodate more harvest opportunity since the harvest was well below the harvestable surplus. Decision making factors such as an increasing trend in abundance estimates, increasing bull:100 cow ratios, and positive signs with the reproductive indices, such as pregnancy rates of two and three year old females, all suggested this herd was doing well and capable of accommodating more harvest opportunity.

In the past two years however, we have seen indications that this herd may still be struggling to rebound. This herd has experienced two consecutive years of calf:100 cow ratios in the lower 20s, well below our management objective of 30 calves:100 cows. A calf mortality study that was initiated in spring 2017 to assess predation on and survival of neonates indicated high mortality of caribou calves in both the northern and southern calving grounds. The northern calving group had a mortality rate of 84% by late summer and the southern calving group was at about 60% during this same period. Although these data are for only a single year, they provide some rationale for the low calf-to-cow ratios seen during the fall composition counts. Additionally, the bull:100 cow ratio that had been increasing steadily since 2005 declined from 39 bulls:100 cows in 2016 to 32 bulls:100 cows in 2017, again falling short of our management objective of 35 bulls:100 cows.

An active intensive management (IM) program is in place in the Mulchatna range, aimed at removing wolves to increase caribou calf survival and recruitment. This IM effort has been in place since 2011, and is being revised to increase the area where wolves can be removed by permitted pilots. Presently the Mulchatna herd is below the IM objectives for abundance, bull:100 cow ratios, and the calf:100 cow ratios. The harvest (330 caribou in RY16) is also well below the amount reasonably necessary for subsistence (2,100–2,400), although the harvest has been increasing in each of the past three years. Although the reported harvest is well below the estimated harvestable surplus of approximately 1,200 animals, the low harvest is due more to lack of access to caribou than it is to absence of caribou. Lack of snow has led to poor winter travel conditions and has hindered snowmachine travel, which is essential for hunters to access caribou herds.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. However, there are a number of factors that should be considered when addressing this proposed action. There is an active intensive management program within portions of the Mulchatna caribou range, aimed at increasing calf survival and enhance population growth. The Mulchatna caribou herd is below IM objectives for abundance, bull:100 cow ratios, calf:100 cow ratios, and the harvest, as well as the harvestable surplus, is well below the amount reasonably necessary for subsistence.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 148– 5 AAC 92.080(4)(B)(i). Unlawful methods of taking big game. Allow the use of a snowmachine for positioning caribou, wolf, or wolverine in Unit 17.

PROPOSED BY: Kenneth Nukwak

WHAT WOULD THE PROPOSAL DO? This proposal would add Unit 17 to a list of Game Management Units where a snowmachine could be used to position a caribou, wolf, or wolverine for harvest, and caribou, wolves, or wolverines could be shot from a stationary snowmachine.

WHAT ARE THE CURRENT REGULATIONS? Currently in Unit 17 a snowmachine can be used to position a hunter to select individual wolves for harvest, and wolves may be shot from a stationary snowmachine. However, it is not legal to use a snowmachine to position any game for harvest, including caribou, wolf, or wolverine.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If this proposal were adopted, it would allow hunters to pursue wolves, wolverine and caribou with a snowmachine to position them for harvest in Unit 17. The snowmachine would have to be stationary to take an animal. This activity could enhance the harvest of wolves to help us meet our intensive management objectives for moose and caribou in portions of Unit 17.

This type of activity could occur numerous times and negatively affect the condition and ultimately the survival of these animals. This proposed action for caribou would also deviate from the consistent regulatory approach we have adopted for Mulchatna caribou management.

BACKGROUND: This proposed change would replicate the regulations for this method and means that have previously been adopted for Units 22, 23 and 26A, where caribou are much more numerous than in Unit 17.

In Unit 17, snowmachines are the major source of access for hunters and trappers pursuing wolves, wolverine, or caribou. The harvest of these species reflects this access with higher harvest in good snow years, and lower harvests when snowmachine travel is inhibited by lack of snow. Beginning in fall 2006, the regulation allowing the use of a snowmachine to position a hunter to select an individual wolf was implemented for Unit 17, but using a snowmachine to position a wolf, wolverine or caribou is not legal.

There are two caribou herds in Unit 17, the Nushagak Peninsula herd and the Mulchatna herd. Although animals in each herd are occasionally harvested using river boats, aircraft, or ORVs, the bulk of caribou harvest by local residents is taken using snowmachines. Most harvest takes place during February and March when longer days and generally better travelling conditions for snowmachines allow hunters to access caribou.

The Nushagak Peninsula herd is situated just south of the village of Manokotak and just west of Dillingham. In good travelling conditions, both communities can access this herd by snowmachine and often there can be numerous hunting parties pursuing these caribou on a given day. Although the caribou within this herd range across the peninsula they seldom venture off of it thereby providing hunters with a high percentage chance of finding animals. The terrain is generally flat and open, with little refugia for caribou to escape detection or pursuit, and even under the present regulations, these caribou are subjected to routine disturbance and are very quick to run from the sound of a snowmachine.

The Mulchatna herd, although much more remote than those on the Nushagak Peninsula, do at times reside within snowmachine distance of the Nushagak River villages. Word generally gets out fast when caribou are near, and numerous parties may target the same group(s) of caribou over the period of time when the caribou are accessible. As with the caribou on the Nushagak Peninsula, any given group of caribou near the villages could be approached numerous times over a short period of time. The relatively large number of people interested in pursuing caribou combined with the low numbers of animals or groups of animals that are accessible could lead to multiple disturbance episodes per day, or at least in a given window of good travel weather.

Another aspect of this proposal related to the positioning of wolves could be beneficial to caribou and moose populations. Currently most wolves that are taken in Unit 17 are done so with the use of snowmachines.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The department does have some concerns with allowing hunters to use a snowmachine to position caribou, because this could lead to high levels of disturbance for the same groups of animals on a daily basis in some cases.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 149– 5 AAC 84.270. Furbearer trapping, and 92.095(a)(3). Unlawful methods of taking furbearers; exceptions. Liberalize the season and methods and means for trapping beaver in Units 9 and 17.

PROPOSED BY: Alaska Professional Hunters Association.

WHAT WOULD THE PROPOSAL DO? This proposal would change the beaver trapping season in Unit 9 and 17 with the following proposed changes:

- No closed season.
- No bag limit.

- You may shoot up to the established bag limit with either firearm or bow and arrow throughout the season provided that either the meat or the hide is salvaged.
- From June 1 to October 9 taking beaver by any means other than a firearm or bow and arrow is prohibited.
- Beaver only need to be sealed if they are to be sold as raw fur.
- You may shoot a beaver on the same day you have flown in an airplane if the beaver is either caught in a trap or snare or you are more than 300 feet from the airplane.
- You may disturb or destroy a beaver dam.

WHAT ARE THE CURRENT REGULATIONS?

Units 9 and 17:

- There is no hunting season, only a trapping season.
- Season dates are October 10–May 31.
- No bag limit.
- Firearms may be used to take up to two beaver per day from April 15–May 31.
 - During the rest of the open season, taking beaver by any means other than a steel trap or snare, except that a firearm may be used to take two beaver per day in Units 9 and 17 from April 15 through May 31 if the meat is salvaged for human consumption; and in Unit 17 a firearm or bow and arrow may be used to harvest beaver from December 1–April 14, provided that the meat is salvaged.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Several aspects of this proposal (i.e., no closed season; the use of firearms throughout the year to harvest beaver) could lead to an increase in beaver harvest, and possibly depletion of beavers in easily accessible areas. Salvage of beaver that are shot could be difficult, especially in rivers where moving water makes retrieval difficult. The requirement to only seal beavers if they are to be sold as raw fur would remove any value of our beaver sealing program because many of the beaver that are trapped in southwest Alaska are tanned and made into hats, mittens, and other crafts.

Another portion of this proposal would allow the destruction of beaver dams. This is already legal providing it is done with hand tools: the use of mechanical means is only allowed under the conditions of a permit issued by the department's Division of Habitat.

BACKGROUND: Both Unit 17 and 9 are part of the southwest Alaska region, and furbearer management has been similar for both of these areas over time.

The beaver season has changed substantially over the past 20 years for Unit 17.

- 1991–1996: the seasonal bag limit in Unit 17 was 20 beavers, with the season in Unit 17A running from Jan. 1–Jan. 31 while that in Unit 17B&C ran from Jan. 1–Feb. 28.
- 1997: the season length was increased to Nov. 10–Feb. 28 and the seasonal bag limit was increased to 40 beavers. Additionally, a spring season was initiated that ran from April 15–May 31 with a daily bag limit of two beavers by firearm; however, the meat needed to be salvaged for human consumption. This spring firearm season and the condition requiring the salvage of meat is still in place today.
- 1999: the season was extended from Feb. 28 to March 31.

- 2003: the season was again extended to Oct. 10–March 31, and the seasonal bag limit was removed.
- 2010: the season was extended again to Oct. 10–May 31.
- 2015: The period of time when a person can shoot a beaver was lengthened, and the use of a bow and arrow to shoot beaver was added to the legal method and means.

Reasons for the continued lengthening and liberalization of the beaver season stemmed from an apparent abundance of beaver, and a declining constituency of beaver harvesters. Thus there have not been any unitwide conservation concerns with the steady liberalization of beaver trapping and harvesting opportunity. However, during advisory committee meetings prior to the 2015 board meeting, several Dillingham trappers voiced concerns regarding local depletions of beaver due to excessive season lengths and unlimited bag limits.

Currently the department does not have any conservation concerns with beavers in Unit 9 or 17. The amount of trapping effort is just a portion of what it was 20 years ago, and the drastically lower harvest is likely a reflection of that decline in effort. Observations of beaver sign and activity during aerial surveys as well as discussions with moose hunters, trappers, and department fisheries staff indicate that beavers are widespread and abundant throughout most of these units.

The removal of beaver dams by use of hand tools does not require a fish habitat permit, however removal by mechanical means, in either a resident or anadromous waterbody, does require a fish habitat permit pursuant to AS 16.05.841 or AS 16.05.871. All debris associated with the removal of a beaver dam must be disposed of in an upland location to prevent the formation of any fish passage barriers.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. We do not see this change causing a biological concern although there could be some depletion of beavers in easily accessible areas due to this liberalization of seasons and bag limits as well as methods and means. The harvest of beaver by firearm also comes at the cost of potentially losing beaver to sinking under water after being shot. This could lead to some level of waste associated with this method of harvest.

COST ANALYSIS: Adoption of this proposal would not result in significant costs to the department.

PROPOSAL 150 – 5 AAC 85.045(a)(1). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose seasons in Unit 1C.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal would reauthorize the antlerless moose hunts in Unit 1C for RY2018.

WHAT ARE THE CURRENT REGULATIONS? Two antlerless moose hunts are authorized in Unit 1C. Those hunts are authorized for the Berners Bay drainages during the September 15–October 15 general hunt and in the Gustavus hunt area from November 10–December 10. In Berners Bay a maximum of 30 permits may be issued, and in Gustavus a maximum of 100 permits may be issued. Bag limit in both areas is one moose, and both hunts are open to residents and nonresidents.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The antlerless hunts in Unit 1C (Berners Bay and Gustavus) would be reauthorized for RY2018. Season dates and bag limits will remain the same as summarized above.

BACKGROUND: Under 5 AAC 98.005 a majority of the Juneau-Douglas Fish and Game Advisory Committee must annually vote to reauthorize the Berners Bay antlerless moose hunt and a majority of the Icy Straits and the Juneau-Douglas Fish and Game advisory committees must annually vote to reauthorize the Gustavus antlerless moose hunt. The Icy Straits advisory committee is currently inactive. During their October 16, 2017 meeting the Juneau-Douglas advisory committee voted 9 - 0 in support of this proposal.

Antlerless hunts in Unit 1C were originally adopted as tools to manage relatively small and isolated moose populations nearing or exceeding carrying capacity of the limited winter range available in the Berners Bay and the Gustavus areas. During a December 11, 2016 aerial survey in Berners Bay department staff counted 115 moose (18 bulls, 31 cows, 27 calves, and 39 unknown adults). Correcting for sightability based on radio-marked cows, we estimated the December 2016 population to be 141 ± 25 moose. Due to the unusually warm and snow-free winter of 2015-16, we were unable to survey moose in Berners Bay. However, during a December 2014 aerial survey in Berners Bay department staff counted 105 moose (22 bulls, 52 cows, 24 calves, and 7 unknown adults). Correcting for sightability based on radio-marked cows, we estimated the population to be 109 ± 6 moose. Because the numbers of moose seen on the two most recent surveys were similar, we believe the population is stable or slowly growing. The antlerless moose hunt in Berners Bay was last open in RY2006.

A December 2016 aerial survey in Gustavus flown under good conditions found 149 moose including 36 cows, 24 bulls, 22 calves, and 67 adults of unknown sex. Correcting for sightability based on radio-marked cow moose, the department estimated the population to be 279 ± 72 moose. A November 23, 2015 aerial survey in Gustavus flown under poor conditions counted only 97 moose (65 cows, 15 bulls, 15 calves, and 2 unknown adults). Because few collared moose were located during that survey, the population could not be estimated using sightability of radio-marked cows. However, data collected during a March 2015 survey resulted in a population estimate of 323 ± 87 moose. Despite the difference between the December 2016 and November 2015 surveys, based on poor survey conditions during November 2015 and findings of the March 2015 survey, we believe the Gustavus moose population is stable. The antlerless moose hunt in Gustavus was last open in RY2008.

The board made a negative customary and traditional use finding for moose in the Unit 1C Gustavus hunt area, and Berners Bay is within the Juneau Nonsubsistence Area.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to reauthorize antlerless moose hunts in the Berners Bay and Gustavus hunt areas. Based on

surveys in recent years both populations appear stable and below carrying capacity of the range. We will continue to monitor both herds using annual aerial surveys as snow conditions allow and to maintain collared animals in both herds to estimate sightability correction factors as funding allows. Antlerless hunts will only be opened when survey data and population estimates suggest a herd is rapidly expanding or that cow harvests can be sustained over time without detrimental effect on the herd.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 151 – 5 AAC 85.045(a)(3) Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 5A, Nunatak Bench.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal would reauthorize take of antlerless moose during registration hunt RM059 in Unit 5A, Nunatak Bench for RY2018.

WHAT ARE THE CURRENT REGULATIONS? Registration moose hunt, RM059, is authorized for the Nunatak Bench portion of Unit 5A. Season dates are November 15–February 15 with a bag limit of one moose. A maximum of 5 moose may be taken. This hunt is open to residents and nonresidents.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Take of antlerless moose during registration moose hunt RM059 in Unit 5A would be reauthorized for RY2018. Season dates and bag limits would remain the same as summarized above.

BACKGROUND: Under 5 AAC 98.005 antlerless moose hunts must be reauthorized annually by a majority vote of the local advisory committee. The Yakutat Fish and Game Advisory Committee met on November 13, 2017 and voted 7 to 1 in support of this proposal.

Because season dates for the Nunatak Bench hunt (RM059) include the period after bulls have dropped their antlers, take of either sex is allowed. Deep snow accumulates in the Nunatak Bench area, greatly limiting habitat accessible to moose. To ensure the small area of available winter habitat can support the number of moose using it, the department manages for relatively low numbers of moose. However, because so few moose have been seen during recent surveys, no registration permits for RM059 have been issued since RY2005. Only 14 moose (3 bulls, 2 cows, 3 calves, and 6 unidentified adults) were seen during the most recent survey (December 2016). Regular surveys in this area are hampered by its remote location, frequently inclement weather, and lack of suitable survey aircraft in Yakutat. However, the department will continue surveys as opportunity allows, and does not plan to issue permits for this hunt until at least 25 moose are counted during a single survey.

The board made a positive customary and traditional use finding for all of Unit 5, with an amount reasonably necessary for subsistence of 50 moose for the entire unit.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to reauthorize the antlerless moose hunt in Unit 5A, the Nunatak Bench. This hunt (RM059) is considered an attractive option for hunters who were unsuccessful in the other Yakutat area moose hunts (RM061 & RM062).

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

**ANALYSIS
and
RECOMMENDATION
for
BOARD OF GAME PROPOSAL 152-161**

The department is in the process of preparing an analysis and recommendations for Proposals 152, 153, 154, 155, 156, 157, 158, 159, 160, and 161 which will be provided in advance of the Dillingham, Central/Southwest Board of Game meeting.

PROPOSAL 152 – 5 AAC 085.045(a)(4) Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 6C.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? Adoption of this proposal would ensure that the department has the necessary tools to manage the Unit 6C moose population within objectives.

WHAT ARE THE CURRENT REGULATIONS?

Seasons and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(4)		
...		
Unit 6(C)	Sept. 1–Oct. 31 (General hunt only)	No open season.
1 moose by drawing permit only; up to 40 permits for bulls and up to 20 permits for antlerless moose may be issued		
1 moose by registration permit only	Nov. 1–Dec. 31	No open season
...		

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?

This proposal reauthorizes antlerless hunts in Unit 6C as required by statute. Resident hunters would be able to continue to harvest antlerless moose during hunts administered by ADF&G on state-managed lands in Unit 6.

BACKGROUND:

Antlerless moose seasons must be reauthorized annually. The population objective is 400–500 moose. A population survey completed during February 2014 yielded an estimate of 610 moose, 25% of which were calves. This population is above its objective and could be negatively impacting habitat. We have managed this hunt cooperatively with the U. S. Forest Service and the available antlerless harvest quota in Unit 6C is currently harvested under a federal subsistence season. We have not held the state antlerless hunt since the 1999–2000 season. In 2013, a registration hunt was established that could be used to harvest moose, including antlerless, if the federal subsistence hunt is not held or it does not result in the desired amount of harvest. At this time, quotas have been raised on both the federal and state side to bring the population to within its objectives. Continuation of the antlerless hunts is necessary to achieve population at objectives.

The board made a negative customary and traditional use finding for all of Unit 6.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to reauthorize antlerless harvests in Unit 6.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 153 - 5 AAC 85.045(13). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose hunting season on Kalgin Island in Unit 15B.

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? This proposal would reauthorize the antlerless moose hunt on Kalgin Island in Unit 15B.

WHAT ARE THE CURRENT REGULATIONS?

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

(13)

...

Unit 15(B), Kalgin Island
1 moose per regulatory year,
by registration permit only

Aug. 20—Sept. 20

Aug. 20—Sept. 20

There is a positive C&T finding for moose on Kalgin Island, and an ANS of 2.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The antlerless moose season on Kalgin Island (RM572) in Unit 15B would be reauthorized.

BACKGROUND: Antlerless moose hunts must be reauthorized annually. The current regulation for hunting moose on Kalgin Island in Unit 15B allows hunters to harvest antlerless moose with the goal of reducing the population to the management objective.

In response to concerns that the moose population on Kalgin Island had exceeded the island's carrying capacity and due to deteriorating habitat conditions, the board established a drawing permit hunt for antlerless moose in 1995. In a further attempt to reduce the number of moose on the island, the board established a registration hunt for any moose in 1999. Despite these measures to reduce moose numbers, moose remain abundant on the island and continue to exceed the management objective.

During the most recent moose survey, department staff counted 101 moose on Kalgin Island in January 2017. This count exceeded the population objective of 20–40 moose.

The "any moose" registration hunt is recommended to provide additional mortality on this predator-free island population. A registration hunt also allows the department to continue gathering biological information from specimens provided by successful hunters. The difficult hunting conditions and limited access will minimize the danger of over-harvest.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. This hunt helps to manage the moose population on Kalgin Island and provides opportunity for those who do not want to hunt moose in areas with antler restrictions or where legal harvest is restricted to one sex.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 154 - 5 AAC 85.045.(a)(13). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose season in a portion of Unit 15C.

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? This proposal would reauthorize the antlerless moose hunt for the Homer benchland and the targeted, antlerless hunt along the Sterling Highway in Unit 15C.

WHAT ARE THE CURRENT REGULATIONS? The current regulations as defined in 85.045 are:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(13)		
...		
Unit 15(C), that portion south of the south fork of the Anchor River and northwest of Kachemak Bay		
RESIDENT HUNTERS:		
1 bull with spike or 50-inch antlers or antlers with 4 or more brow tines on one side; or	Sept. 1—Sept. 25 (General hunt only)	
1 antlerless moose by drawing permit only; the taking of calves, and females accompanied by calves, is prohibited; up to 100 permits may be issued in combination with the nonresident drawing hunt: or	Oct. 20—Nov. 20	
1 moose by targeted permit only,	Oct. 15—Mar. 31	
NONRESIDENT HUNTERS:		
1 bull with 50-inch antlers or antlers with 4 or more brow tines on one side; or		Sept. 1—Sept. 25 (General hunt only)
1 antlerless moose by drawing permit only; the taking of calves, and females accompanied by calves, is prohibited; up to 100 permits may be issued in		Oct. 20—Nov. 20

combination with the resident
drawing hunt

Remainder of Unit 15(C)

RESIDENT HUNTERS

1 bull with spike or 50-inch antlers or antlers with 4 or more brow tines on one side; or	Sept. 1—Sept. 25 (General hunt only)
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1 moose by targeted permit only,	Oct. 15—Mar. 31
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NONRESIDENT HUNTERS

1 bull with 50-inch antlers or antlers with 4 or more brow tines on one side;	Sept. 1—Sept. 25
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WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The antlerless moose season for the Homer benchland (DM549) and the targeted hunt (AM550) along the Sterling Highway in 15C would be reauthorized for the 2018–2019 hunting season.

BACKGROUND: Antlerless moose seasons must be re-authorized annually. The Homer benchland in Unit 15C that encompasses the hunt boundary of DM549 often holds high moose densities in winters when deep snow pushes the moose down into human populated areas. Even without deep snow, moose die due to malnutrition and negative interactions with humans are common as moose become more aggressive in their search for food around human residences.

In February 2017, a GSPE population survey was conducted that produced a population estimate of 3,529 moose \pm 760. When compared to the 2013 GSPE estimate of 3,204 \pm 650, the 2017 estimate suggests the 15C moose population is stable or increasing slightly. Fall composition counts in December 2017 provided a bull ratio of 53 bulls:100 cows and a calf ratio of 22 calves: 100 cows. Fifty permits were issued in each of the last 10 years resulting in an average harvest of 23 cows per year.

The purpose of AM550 is to allow for the harvest of antlerless moose along the Sterling Highway in Unit 15C during the winter if they pose a significant threat to highway vehicles. On average 62 known animals are killed each year in vehicle collisions in Unit 15C. The department will decide when and where permits will be issued during the hunt period. The hunt is administered through a registration permit and up to 100 moose may be taken. The number of

permits issued each year will depend on conditions, and it is possible no permits will be issued in some years.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Local residents are in favor of a limited antlerless moose harvest that provides additional opportunity and helps to limit habitat degradation and wildlife conflicts.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department and is expected to help limit costs to the department associated with nuisance moose.

PROPOSAL 155 – 5 AAC 85.045(a)(5). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Units 7 and 14C.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the antlerless moose season in the Twentymile/Portage/Placer hunt area in Units 7 and 14C.

WHAT ARE THE CURRENT REGULATIONS? The current regulations are:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(5) ... Unit 7, the Placer River drainages, and that por- tion of the Placer Creek (Bear Valley) drainage outside the Portage Glacier Closed Area, and that portion of Unit 14(C) within the Twentymile River drainage		

RESIDENT HUNTERS:

1 moose by drawing permit only; up to 60 permits for bulls will be issued in combination with nonresident hunts, and up to 70 permits for antlerless moose will be issued	Aug. 20—Oct. 10 (General hunt only)
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NONRESIDENT HUNTERS:

1 bull by drawing permit only;
up to 60 permits for bulls
will be issued in combination
with resident hunts

Aug. 20—Oct. 10

...

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Antlerless moose seasons must be reauthorized annually. The harvest of antlerless moose provides the department with a management tool to maintain the number of moose in the Twentymile/Portage/Placer area at a population level low enough to reduce over-browsing of winter habitat, moose-vehicle collisions, and starvation during severe winters. The moose population will be healthier and more productive due to decreased stress levels associated with winter food shortages.

BACKGROUND: The moose population in the Twentymile/Portage/Placer area has a history of rapid increase following mild winters, and sharp reductions during severe winters. In 2009, antlerless permits were issued for the first time since 2004. The number of permits issued (Table 116-1) depends on the current population estimate and bull:cow ratios, as well as estimated winter mortality. A November 2016 aerial composition count of moose in the Twentymile, Portage, and Placer river drainages found 155 moose with a bull:cow ratio of 31 bulls per 100 cows and a calf:cow ratio of 18 calves per 100 cows.

Table 116-1. Moose harvest in the Twentymile/Portage/Placer hunt area in Units 7 and 14C, regulatory years 2009-2017.

Regulatory Year	Bull Permits	Antlerless Permits	Bulls Harvested	Cows Harvested
2009	40	30	25	17
2010	40	30	15	15
2011	40	30	19	8
2012	25	20	12	7
2013	25	20	10	7
2014	40	30	17	10
2015	30	30	11	8
2016	30	30	13	12
2017	30	30	16	6

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal to maintain antlerless hunts in Units 7 and 14C. These hunts have been successful in creating additional moose hunting opportunities with little or no controversy. In addition, the harvest of antlerless

moose has helped achieve the department's goal of maintaining moose numbers at a level to avoid die-offs during harsh winters.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 156 – 5 AAC 85.045(a)(12). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 14C.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Reauthorize the antlerless moose seasons in Unit 14C.

WHAT ARE THE CURRENT REGULATIONS? The current regulations are:

<u>Units and Bag Limits</u>	<u>Resident Open Season (Subsistence and General Hunts)</u>	<u>Nonresident Open Season</u>
(12)		
...		
Unit 14(C), Joint Base Elmendorf-Richardson (JBER) Management Area	Day after Labor Day —Mar 31 (General hunt only)	Day after Labor Day —Mar 31
1 moose by regulatory year by drawing permit, and by muzzleloading blackpowder rifle or bow and arrow only; up to 185 permits may be issued		
Unit 14(C), that portion known as the Birchwood Management Area	Day after Labor Day —Sept. 30 (General hunt only)	Day after Labor Day —Sept. 30
1 moose by drawing permit, by bow and arrow only; up to 25 permits may be issued		
Unit 14(C), that portion known as the Anchorage	Day after Labor Day —Nov. 30	No open season

Management Area

(General hunt only)

1 antlerless moose by drawing permit only, and by bow and arrow, shotgun, or muzzleloader only; up to 50 permits may be issued

Unit 14(C), that portion of the Ship Creek drainage upstream of the Joint Base Elmendorf-Richardson (JBER) Management Area

1 moose by drawing permit only; up to 50 permits may be issued; or

Day after Labor Day
—Sept. 30
(General hunt only)

Day after Labor Day
—Sept. 30

1 bull by registration permit only

Oct. 1—Nov. 30
(General hunt only)

Oct. 1—Nov. 30

...

Remainder of Unit 14(C)

1 moose per regulatory year, only as follows:

1 bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on one side; or

Day after Labor Day
—Sept. 30
(General hunt only)

Day after Labor Day
—Sept. 30

1 antlerless moose by drawing permit only; up to 60 permits may be issued; or

Day after Labor Day
—Sept. 30
(General hunt only)

No open season

1 bull by drawing permit only, by bow and arrow only; up to 10 permits may be issued

Oct. 20—Nov. 15

No open season

...

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Adoption of this proposal is necessary for the hunts to continue. The harvest of antlerless moose provides

the department with a management tool to maintain the number of moose in Unit 14C at the desired population objective (1,500 moose). At this population level we have seen reductions in over-browsing of winter habitat, moose-vehicle collisions, moose-human conflicts in urban areas, and starvation during severe winters. At this level, the moose population will be healthier due to decreased stress levels associated with winter food shortages.

BACKGROUND: Moose in Unit 14C are managed intensively for a population objective of 1,500–1,800 moose and an annual harvest objective of 90–270 moose (5AAC 92.108). In 2013, we estimated a moose population of approximately 1,533 moose in Unit 14(C) from a combination of population census, composition surveys and extrapolation to unsurveyed areas. At this population level, we have experienced a decline in human-moose conflicts and decreased winter mortalities. Harvesting cow moose is paramount to maintaining the population at the low end of the objective while providing harvest opportunity.

Antlerless moose hunts must be reauthorized annually. The number of antlerless permits issued (Table 156-1) depends on the current population estimate and bull:cow ratios, as well as estimated winter mortality.

Table 156-1. Cow moose harvest in Unit 14C, regulatory years 2009–2016.

Regulatory Year	Either Sex Permits	Antlerless Permits	Cows Harvested
2009	110	25	29
2010	110	23	32
2011	67	23	25
2012	58	23	18
2013	58	26	24
2014	50	25	19
2015	65	28	23
2016	51	21	20

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal to reauthorize antlerless hunts in Unit 14C. These hunts have been successful in providing additional moose hunting opportunities in the state’s human population center with little controversy. In addition, the harvest of antlerless moose has helped achieve the department’s goal of maintaining moose numbers at the low end of the population objective.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 157 5 AAC 85.045 Hunting seasons and bag limits for moose. Reauthorize the antlerless moose seasons in the Remainder of Unit 18.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the resident and nonresident antlerless moose season in the remainder of Unit 18.

WHAT ARE THE CURRENT REGULATIONS? Antlerless hunting during fall and winter seasons is allowed for resident hunters in the “Remainder of Unit 18”. There are three components to antlerless seasons:

- 1) during August 1–September 30 the bag limit is 2 moose; however, only one antlered bull may be taken and taking calves or cows accompanied by calves is prohibited;
- 2) during October 1–November 30 the bag limit is 2 antlerless moose with no additional restrictions; and
- 3) during December 1–March 15 the bag limit is 2 moose with no additional restrictions.

Antlerless moose hunting is also allowed for nonresident hunters in Unit 18 remainder. The current season for nonresidents is December 1- March 15 one antlerless moose.

There is a positive C&T finding for moose in Unit 18, and an ANS of 200–400.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The antlerless hunts in the remainder of Unit 18 would be reauthorized for RY2018. Hunters would have the same seasons and bag limits as RY2017 (see Current Regulations above).

BACKGROUND: Antlerless moose seasons must be reauthorized annually. The hunt area in the remainder of Unit 18 supports a moose population that has increased to an all-time high level, reaching a conservative estimated minimum population of 17,000 moose. In all areas surveyed, moose populations have twinning rates at or above 40%. Reported harvest during the past three years has averaged 395 bulls and 160 cows.

Harvests by residents in RY2016 (n=626) is very similar to the previous 3-year average harvest (n=605). In RY2016, the harvest ticket reports from the remainder of Unit 18 included 52 antlerless moose (cows) taken in the fall hunt, along with the harvest of 172 antlerless moose (including cows and bulls) taken in a winter hunt. The combined harvest for the current the remainder of Unit 18 represented in this reauthorization is well within sustained yield, and the population trajectory has not been affected by antlerless harvests.

RY2017 is the first year for antlerless hunts for nonresidents. We anticipate that participation in this hunt will be low.

The Remainder of Unit 18 has under-utilized moose habitat and is expected to support a growing moose population. Continuing antlerless moose harvest opportunity will benefit hunters and may also help slow the growth rate of the population.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to maintain antlerless hunts in areas where moose populations are increasing.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 158 – 5 AAC 85.045(18) Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose hunting seasons in Unit 20A.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? Reauthorize the antlerless moose hunting seasons in Unit 20A.

WHAT ARE THE CURRENT REGULATIONS?

Unit 20A Ferry Management Trail, Wood River Controlled Use, and the Yanert Controlled Use Areas

Residents:

- drawing permit for one antlerless moose, August 15–November 15.
- targeted hunt for one moose by permit (AM751) by shotgun, crossbow, or bow and arrow only; announced by emergency order.

Nonresidents:

- No antlerless moose seasons

Unit 20A remainder

Residents:

- drawing permit for one antlerless moose, August 15–November 15.
- registration permit for one antlerless moose, August 25–February 28, permits have not been issued for several years because of uncertainty regarding population size.

Nonresidents:

- No antlerless moose seasons

Hunts for bull moose are also available in Unit 20A. Refer to the *2016–2017 Alaska Hunting Regulations* for specific details about moose hunting seasons in Unit 20A.

There is a positive C&T finding for moose in Unit 20A, outside the boundaries of the Fairbanks Nonsubsistence Area with an ANS of 50–75 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The Alaska Department of Fish and Game (department) will have the authority to use antlerless hunts as a management tool to regulate the moose population in Unit 20A.

BACKGROUND: Antlerless moose hunting seasons must be reauthorized annually. Overall, the goal of these hunts is to protect the health and habitat of the moose population over the long term and to provide for a wide range of public uses and benefits. Antlerless moose hunts in Unit 20A help to regulate population growth, meet the intensive management (IM) mandate for high levels of harvest, provide subsistence hunters with a reasonable opportunity for success in obtaining moose for subsistence uses outside the Fairbanks Nonsubsistence Area (part of the western Tanana Flats), and allow use of targeted hunts as a tool to manage moose–vehicle collision and nuisance situations.

This reauthorization will allow the department to manage the moose population at the optimum level (i.e., in concert with the available habitat). Additional hunting opportunity and harvest will be provided by utilizing a harvestable surplus of antlerless moose. The antlerless harvest will help in meeting IM harvest objectives without reducing bull:cow ratios to low levels. Meat and subsistence hunters will benefit from the opportunity to harvest cow moose. The moose population will benefit by having moose density compatible with the habitat. Motorists and residents may benefit from reduced moose–vehicle collisions and moose–human conflicts.

The current objective is to maintain the Unit 20A population at roughly 12,000 moose while continuing to monitor nutritional condition. In 2015, the post-hunt moose population estimate was 12,315 (10,622–14,009 @ 90% confidence interval). This high-density moose population (approximately 2.5 moose/mi²) continues to experience density-dependent effects, including low productivity and relatively light short-yearling weights of females. Although sporadic signs of improvement in nutritional condition have been observed (i.e., higher twinning rates in 2012 and 2016 and increases in short-yearling weights of males in 2015 and 2016 compared to the late 1990s through early 2000s), no clear signals or significant trends have yet been detected. The department recommends continued antlerless hunts in regulatory year 2018 to regulate population growth (i.e., stabilize the population at 12,000 moose).

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal because antlerless harvests are an important management tool in regulating this high-density, nutritionally-stressed moose population. If antlerless moose hunts are not reauthorized, the department will lose the ability to regulate this moose population and our ability to meet intensive management harvest objectives will be compromised. Additionally, the public will lose an opportunity to hunt a harvestable surplus of cow moose, and subsistence hunters in the portion of Unit 20A outside the Fairbanks Nonsubsistence Area (part of the western Tanana Flats) may not have a reasonable opportunity to pursue moose for subsistence uses.

COST ANALYSIS: Adoption of this proposal would not result in additional costs for the department.

PROPOSAL 159 – 5 AAC 85.045(a)(18). Hunting seasons and bag limits for moose.
Reauthorize antlerless moose seasons in Unit 20B

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? Reauthorize antlerless moose hunting seasons in Unit 20B.

WHAT ARE THE CURRENT REGULATIONS? Antlerless moose hunts are available in Unit 20B by drawing, registration, or targeted permit only, as follows:

Creamer's Field within the Fairbanks Management Area

Residents and nonresidents:

- 1 antlerless moose by drawing permit, by bow and arrow only, up to 150 permits, a recipient is prohibited from taking an antlered bull in the Fairbanks Management Area, September 1–November 27;
- 1 antlerless moose by muzzleloader by drawing permit, up to 10 permits, a recipient is prohibited from taking an antlered bull in the Fairbanks Management Area, Dec 1–January 31.

Remainder of the Fairbanks Management Area

Residents and nonresidents:

- 1 antlerless moose by drawing permit, by bow and arrow only, up to 150 permits, a recipient is prohibited from taking an antlered bull in the Fairbanks Management Area, September 1–November 27

Residents only:

- 1 moose by targeted permit by shotgun or bow and arrow only, up to 100 permits, season to be announced by emergency order

Minto Flats Management Area

Residents only:

- 1 antlerless moose by registration permit, October 15–February 28

Middle Fork of the Chena River drainage

Residents only:

- 1 antlerless moose by drawing permit, up to 300 permits, taking of calves or cows with calves is prohibited, August 15–November 15
- 1 antlerless moose by registration permit, taking of calves or cows with calves is prohibited, October 1–February 28

Southeast of the Moose Creek dike within ½ mile each side of the Richardson Highway

Residents only:

- 1 moose by drawing permit, by bow and arrow, crossbow, or muzzleloader, up to 100 permits, September 16–February 28
- 1 moose by targeted permit by shotgun, crossbow, or bow and arrow only, up to 100 permits, season to be announced by emergency order

Remainder of Unit 20B

Residents only:

- 1 antlerless moose by drawing permit, by youth hunt only, up to 200 permits, August 5–14;
- 1 antlerless moose by drawing permit, up to 1,500 permits, taking of calves or cows with calves is prohibited, August 15–November 15
- 1 moose by targeted permit by shotgun, crossbow, or bow and arrow only, up to 100 permits, season to be announced by emergency order.

Hunts for bull moose are also available in Unit 20B. Refer to the *2016–2017 Alaska Hunting Regulations* for specific details about moose hunting seasons in Unit 20B.

There is a positive C&T finding for moose in Unit 20B, as follows:

- Within the Minto Flats Management Area, with an ANS of 20–40 moose.
- Outside the boundaries of the Minto Flats Management Area and outside the boundaries of the Fairbanks Nonsubsistence Area, with an ANS of 75–100 moose.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Antlerless hunts will continue to be available to hunters, and the department will continue to have the authority to use antlerless hunts as a tool to regulate the Unit 20B moose populations.

BACKGROUND: Antlerless moose hunting seasons must be reauthorized annually. Our goal in Unit 20B is to provide for a wide range of public uses and benefits and to protect the health and habitat of moose populations. Antlerless hunts are important for improving or maintaining the ability of moose habitat to support current populations. Without reducing bull-to-cow ratios, these hunts also help regulate moose population growth, provide hunting opportunity, help meet Intensive Management (IM) objectives for high levels of harvest, provide subsistence hunters with a reasonable opportunity to pursue moose for subsistence uses, and allow use of targeted hunts to manage moose–vehicle collisions and moose–human conflicts. If antlerless hunts are not reauthorized, subsistence hunters in Unit 20B outside the Fairbanks Nonsubsistence Area may not have a reasonable opportunity to pursue moose for subsistence uses.

To mitigate hunter conflicts, we spread hunters out over space and time. Each of 16 hunt areas has permits in 4 time periods: 2 before the harvest ticket hunt, one during, and one after. The earliest of the 4 hunts is a youth hunt that gives hunting opportunity prior to the start of school. Spreading these hunts out over time maintains a few hunters during each season in each permit area, yet is expected to achieve our intended harvest.

Extensive burns in northcentral Unit 20B will provide high quality moose habitat in the future. With improving habitat, continued high predator harvest, and relatively mild winters, we can expect continued high productivity and survival of moose, along with increased yield.

Fairbanks Management Area (FMA) – The purposes of these antlerless hunts are to regulate population growth in the FMA and potentially reduce moose–vehicle collisions and nuisance moose problems.

The number of moose–vehicle collisions in the FMA is high and poses significant safety risks to motorists. In addition, moose nuisance issues continue to place significant demands on property owners. To increase hunting opportunity and harvest and to reduce moose–vehicle collisions, the department incrementally increased the number of drawing permits for antlerless moose in the FMA during Regulatory Year 1999 (RY99; that is, RY = 1 July 1999–30 June 2000) through RY10. Moose–vehicle collisions and moose nuisance problems declined during RY06–RY15, presumably, in part due to the consistent antlerless moose harvests during RY09–RY15.

Minto Flats Management Area (MFMA) – The primary purposes of this antlerless hunt are to provide a reasonable opportunity for subsistence uses and to regulate the moose population in the MFMA.

The MFMA moose density was high in 2010 (4.1 moose/mi²). In order to reduce the moose population, harvest of antlerless moose during RY12 and RY13 was about 2.5% of the population. The fall 2013 estimate showed a more sustainable density (2.6 moose/mi²) in the MFMA. Our best estimate now indicates densities remain high, probably around 2.5 moose/mi². The antlerless harvest in this area is intended to stabilize this population, therefore we intend to only harvest antlerless moose at about 1% of the total population to maintain the current population size.

Targeted Hunts – The purpose of the targeted hunts is primarily to reduce moose–vehicle collisions by harvesting moose that habitually spend time along roadways and have a high likelihood of being injured by highway vehicles or have already been injured. We also use targeted hunts as an option for resolving nuisance situations. These permits are used sparingly but allow the public to harvest specific moose instead of the department dispatching them.

Unit 20B, drainage of the Middle Fork of the Chena River and the Remainder of Unit 20B – The antlerless moose harvest in this area is designed to regulate the moose population in this portion of Unit 20B and help meet the IM harvest objectives for Unit 20B. The 2015 population estimate indicated we were successful in lowering the population. The population declined from the 2009 estimate (20,173 moose) to 11,064 moose, slightly below our objective of 12,000–15,000 moose. Because the population estimate is below our objectives we currently recommend not conducting most of hunts at this time, but would still like to have the authority to conduct them if new population estimates indicate they would be appropriate.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. There are no biological concerns associated with the harvest of antlerless moose taken under these regulations in these hunt areas; however, elimination of these hunts could create a biological concern. We also recommend that the board consider whether a reasonable opportunity for subsistence uses on populations with positive C&T findings would still be provided. The Unit 20B moose population has potential for growth due to the extensive burns (i.e., increased productivity) and high survival rates. If antlerless moose hunts are not reauthorized, the moose population may exceed carrying capacity and would require population reduction. These hunts maintain the opportunity to hunt a harvestable surplus of cow moose, and help to meet IM harvest objectives.

COST ANALYSIS: Approval of this proposal is not expected to result in additional costs.

PROPOSAL 160 – 5 AAC 85.045(a)(18). Hunting seasons and bag limits for moose.
Reauthorize antlerless moose hunting seasons in Unit 20D.

PROPOSED BY: Alaska Department of Fish & Game

WHAT WOULD THE PROPOSAL DO? Reauthorize antlerless moose hunting seasons in Unit 20D.

WHAT ARE THE CURRENT REGULATIONS? Unit 20D currently has antlerless hunts available by drawing permit only, and fewer than 30 permits are issued each year. Antlerless moose (except a cow accompanied by a calf or a calf) seasons in Unit 20D are listed below.

- Bison Range Youth Moose Hunt (YM792)
 - youth (ages 10 to 17) hunters who are residents or nonresident children of residents
 - September 1–30 by drawing permit
 - one bull per lifetime, with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on one side, or one antlerless moose; however, a calf or cow accompanied by a calf may not be taken
- Purple Heart Recipient Hunt (DM795)
 - qualified Purple Heart recipient, both resident and nonresident hunters
 - September 1–15 by drawing permit
 - one moose every 4 years; however, a calf or cow accompanied by a calf may not be taken
- Southwestern Unit 20D, excluding the Delta Junction Management Area (DM791)
 - resident hunters
 - October 10–16 by drawing permit
 - one antlerless moose; however, a calf or cow accompanied by a calf may not be taken

In addition to these drawing hunts, there are registration hunts in regulation that have not been offered in recent years, but that are retained in case the department determines that additional management action is needed to reduce or maintain the moose population by increasing antlerless harvest.

Hunts for bull moose are also available in Unit 20D. Refer to the *2017–2018 Alaska Hunting Regulations* for specific details about moose hunting seasons in Unit 20D.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted, this proposal would allow the department to continue to provide harvest tools and options for moose management in Unit 20D and allow hunters to take a harvestable surplus of antlerless moose (except a calf or a cow accompanied by a calf) in the Bison Range Youth Moose Hunt, the hunt by Purple Heart Recipients, and the Southwestern Unit 20D drawing hunt.

BACKGROUND: Antlerless moose hunting seasons must be reauthorized annually. The goals of the antlerless hunts are to stabilize population growth in Unit 20D and to address concerns about range degradation, reduced nutritional conditions, and reduced reproductive success.

These antlerless moose hunts will likely improve or maintain the ability of moose habitat to support the current moose population. Hunting opportunity and harvest could increase and the additional harvest provided by these hunts could contribute to meeting Intensive Management (IM) harvest objectives. Meat hunters will benefit from the opportunity to harvest cow moose. Moose populations will benefit by having moose densities compatible with their habitat. Delta Junction residents and motorists may benefit from reduced moose–vehicle collisions and moose–human conflicts.

Antlerless hunts help regulate moose population growth and achieve IM objectives for high levels of harvest. Continued antlerless hunts are likely needed to maintain the population at the optimal density and will contribute toward meeting the IM harvest objective of 500–700. However, registration permits will only be issued if additional harvest is needed in specific areas to maintain optimal moose densities. With the exception of the Bison Range Youth Moose Hunt and the hunt by Purple Heart recipients, antlerless permits were not issued during RY09–RY15. In RY16, we issued 12 antlerless drawing permits (DM791).

The antlerless moose hunts and their effect on moose density and population growth will continue to be evaluated. Three indices of density-dependent moose nutritional conditions (biomass removal of current annual growth on winter browse, proportion of females with twin calves, and late-winter calf weights) will be evaluated in relation to changes in moose density. Antlerless moose hunts for Unit 20D will continue to be implemented as needed based on this evaluation. The total number of permits in RY17 will continue to be fewer than 30.

The moose population in Unit 20D reached the IM objective of 8,000–10,000 animals in 2006. The highest density was in southwestern Unit 20D at 5.6 moose/mi². The population in this area was exhibiting the effects of increased competition for food, with a moderately-low, 2-year average twinning rate of 14%. Antlerless hunts during RY06–RY09 contributed to reducing the density in southwestern Unit 20D to 3.9 moose/mi². Overwinter browse utilization decreased from 25% in 2007 to 15% in 2010. The average weight of 9 month-old calves increased from 340 lb in 2010 to 366 lb in 2012 (K. Seaton, ADF&G, unpublished data, Fairbanks).

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. We have no biological concerns regarding continued antlerless hunts. However, we do have biological concerns regarding overpopulation if antlerless hunts are eliminated. The Unit 20D moose population has great potential for growth due to the extensive agricultural land, burns, and high predator harvest. If antlerless moose hunts are not reauthorized, the moose population may exceed carrying capacity and need reduction when new data is available. These hunts offer an opportunity to hunt a harvestable surplus of cow moose and meet IM harvest objectives.

COST ANALYSIS: Adoption of this proposal would not result in additional costs for the department.

PROPOSAL 161 – 5 AAC 85.045(24). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose seasons in Unit 26A.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? This proposal reauthorizes the antlerless moose season in the western portion of Unit 26A.

WHAT ARE THE CURRENT REGULATIONS? Antlerless moose hunts for residents are allowed in the portion of Unit 26A west of 156° 00' W. longitude, excluding the Colville River drainage, where antlerless hunting through a 1 moose bag limit is allowed July 1–September 14.

There is a positive C&T for moose in Unit 26, and an ANS of 21–48, including 15–20 in Unit 26A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The antlerless moose hunt in the portion of Unit 26A west of 156° 00' W longitude and north of the Colville drainage would be reauthorized. Because antlerless moose seasons were closed due to population declines in the remainder of the unit, only the western portion of Unit 26A has a hunt affected by this proposal.

BACKGROUND: The moose population is low in Unit 26A and has declined since 2008. The minimum population count declined from 1,180 moose in 2008 to 610 moose in 2011. The population grew slowly from 2011–2013 but declined again to 294 moose in 2014. No count was completed in 2016. Reported moose harvest in recent years has remained low: 13 moose in 2010, 5 in 2011, 9 in 2012, 6 in 2013, 2 in 2014, 3 in 2015 and 4 in 2016.

The portion of Unit 26A west of 156° 00' W longitude and north of the Colville drainage does not have a year-round moose population. Moose occasionally disperse away from the major river drainages to the coastal plain during summer months, and these are the only moose available for harvest in this northwestern portion of Unit 26A. The small number of antlerless moose harvested under the hunt has very little impact on the size of the population. To date, after several years of hunting opportunity in this area, only 3 antlerless moose have been harvested: 1 cow in 2006, 1 in 2008, and 1 in 2014. Keeping an antlerless moose season in this portion of Unit 26A provides additional opportunity in a portion of the state that generally does not have moose.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Antlerless harvests in the western section of Unit 26A are anticipated to be very low and have little impact on the population.

COST ANALYSIS: Approval of this proposal is not expected to result in additional costs to the department.

PROPOSAL 162 – 5AAC 92.015. Brown bear tag fee exemptions. Reauthorize the brown bear tag fee exemption for Units 12, 19, 20, 21, 24, 25, 26B, and 26C.

PROPOSED BY: Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO? The proposal would reauthorize the current resident tag fee exemptions for brown/grizzly bears in Units 12, 19, 20, 21, 24, 25, 26B, and 26C.

WHAT ARE THE CURRENT REGULATIONS? Brown/grizzly tag fees and locking tags are not required for residents in Units 12, 19, 20, 21, 24, 25, 26B, and 26C.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The \$25 resident tag fee exemption would be continued for brown/grizzly bear hunts in Units 12, 19, 20, 21, 24, 25, 26B, and 26C.

BACKGROUND: The Board of Game must annually reauthorize all resident tag fee exemptions. Reauthorizing these tag fee exemptions would allow residents who are unable to purchase the \$25 tag before hunting, due to lack of vendors or economic reasons, to opportunistically and legally harvest brown/grizzly bears. Resident brown bear tag fees were put in place statewide during the mid-1970s to discourage incidental harvest, elevate the status of brown bears to trophies, and to provide revenue. Today, Region III populations are healthy, brown bears are highly regarded as trophies, and season dates and bag limits effectively regulate harvest.

Eliminating all resident brown bear tag fees throughout Region III simplifies regulations, increases resident hunter opportunity, and is not likely to cause declines in these brown bear populations. This reauthorization would assist with our objective of managing Region III brown bear populations for hunter opportunity and would continue to allow hunters to take brown bears opportunistically. During regulatory years 2006–2015 approximately 31% of brown bears harvested by resident hunters in Region III were taken incidentally to other activities, compared with 13% statewide.

We estimate that brown bear harvests account for approximately 6% of the bear populations. The harvest is composed primarily of males and is sustainable. Where harvests are elevated (i.e., Units 20A, 20B, 20D, and portions of 26B), brown bear populations are managed by adjusting seasons and bag limits. The resident tag fees that were in place prior to 2010 appeared to have little effect on harvest rates in these areas, which are managed through changes in seasons and bag limits.

As part of this request to reauthorize exemption of resident brown bear tag fees throughout Region III, we recommend that the board, at a minimum, continue to reauthorize the tag fee exemptions for subsistence registration permit hunts in Units 19A and 19B (downstream of and including the Aniak River drainage), 21D, and 24. The customary and traditional use findings and amounts reasonably necessary for subsistence are presented below:

Customary and traditional uses of brown bear populations, Region III:

Unit	Finding	Amount reasonably necessary for subsistence
Unit 12	Negative	---
Units 19A and 19B upstream of and excluding the Aniak River drainage, and Unit 19D (includes a portion of 17B and 17C)	Positive	10–15
Units 19A and 19B downstream of and including the Aniak River drainage	Positive	5
Unit 19C	Negative	---
Unit 19D	Positive	2–6
Units 20A and 20B outside the boundaries of the Fairbanks Nonsubsistence Use Area and Unit 20C	Positive	1–3
Unit 20D, outside the boundaries of the Fairbanks Nonsubsistence Area	Positive	1–2
Unit 20E	Negative	---
Units 21 and 22	Positive	20–25
Units 23, 24, and 26	Positive	25–35
Unit 25	Negative	---

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Brown bear numbers appear to be stable in the Interior and Northeast Arctic Units. Resident tag fees that were in place prior to 2010 appeared to have no effect on harvest rates in the region. Therefore, this proposal does not present a biological concern. Reauthorizing these tag fee exemptions would provide hunting allow residents to opportunistically and legally harvest brown/grizzly bears.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

PROPOSAL 163 – 5AAC 92.015. Brown bear tag fee exemptions. Reauthorize the brown

bear tag fee exemption for Units 18, 22, 23, and 26A.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? The proposal would reauthorize the current resident tag fee exemptions for brown bears in Units 18, 22, 23 and 26A.

WHAT ARE THE CURRENT REGULATIONS? Brown bear tag fees are not required for residents in drawing, registration, or subsistence permit hunts in Units 18, 22, 23, and 26A.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Resident hunters would not be required to purchase a resident locking tag for drawing or registration permit brown bear hunts in Units 18, 22, 23, 26A. Similarly, hunters participating in subsistence registration permit hunts would not be required to purchase a brown bear locking tag to harvest a bear, although possession of the subsistence registration permit would still be required.

BACKGROUND: The Board of Game must reauthorize brown bear tag fee exemptions annually or the fee automatically becomes reinstated. Brown bear drawing and registration permit hunts have had fees exempted in Unit 18 for 5 years, Unit 22 for 15 years, Unit 23 for 10 years, and Unit 26A for 5 years. Exemptions have been implemented to allow: 1) incremental increases in harvest, 2) additional opportunity for residents, and 3) harvest for a wide range of uses. Increased harvest is allowable because portions of these units have high bear populations. These harvests are within sustained yield limits and previous exemptions of the resident tag fee have not caused dramatic or unexpected increases in overall harvest.

In subsistence brown bear registration permit hunts, reauthorizations are needed for Units 18, 22, 23, and 26A where requirements include: 1) a registration permit; 2) a tag fee exemption; 3) salvaging meat for human consumption; 4) no use of aircraft in Units 22, 23 and 26A; 5) no sealing requirement unless hide and skull are removed from subsistence registration permit hunt area; and 6) if sealing is required, the skin of the head and the front claws must be removed and retained by the department at the time of sealing. Continuing the tag fee exemption helps facilitate participation in the associated brown bear harvest programs maintained by the department for subsistence registration permit hunts. In all units, subsistence brown bear registration permit harvest rates are low and well within sustained yield limits and exempting the resident tag fee has not caused an increase in subsistence harvest.

Table 131-1: Customary and traditional uses of brown bear populations, Units 18, 22, 23 and 26A

Game Management Unit	Finding	Amount reasonably necessary
Unit 18	Positive	20–30
Units 21 and 22	Positive	20–25

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Brown bear numbers are stable or increasing and the increased harvests that result from the tag fee exemption do not present a conservation concern.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs to the department.

Proposal 164 was part of the November 2017 Statewide Board of Game Meeting in Anchorage.

**ANALYSIS
and
RECOMMENDATION
for
BOARD OF GAME PROPOSAL 165**

The department is in the process of preparing an analysis and recommendations for Proposal 165 which will be provided in advance of the Dillingham, Central/Southwest Board of Game meeting.
