Proposal 95 — Moose

Effect of the proposal
- Establish a resident winter moose hunt in 19D East

Department recommendation
- SUPPORT additional harvest but NEUTRAL on the allocative aspects of proposal

McGrath AC proposal
- Support with amendment

Proposal 95 — Moose

Current Unit 19D East resident moose hunting regulations:

RM650
- Sept 1 – Sept 25

Harvest Ticket
- Sept 1 – Sept 20 (outside the UKCUA)
Proposal 95  Moose

Proposed changes: establish a winter hunt in Unit 19D East

- Feb 1 – Feb 28
- Registration permit available in the hunt area from January through the end of the season
- Residents only
- Any moose except cows with calves
- No aircraft except between public airports
- Quota set by the department
Proposal 95  Moose

19D East Moose Survey Areas

Proposal 95  Moose

19D East MSA Data

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## Proposal 95 Moose

### Expanded EMMA Moose Data

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<th>Year</th>
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<th>Calves: 100 cows (±)</th>
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<tbody>
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<td>1,019 (±165)</td>
<td>47 (±3)</td>
<td>15 (±2)</td>
<td>1.9</td>
</tr>
<tr>
<td>2019</td>
<td>965 (±240)</td>
<td>44 (±6)</td>
<td>21 (±15)</td>
<td>1.8</td>
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</tbody>
</table>
Proposal 95  Moose

Current 19D East IM guidelines for managing moose population growth

- Population objective in the EMMA 2 moose/mi²
- >20% twinning promote growth
- 15-20% twinning stabilize population through harvest
- <15% twinning reduce population through harvest

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>singletons</th>
<th>twins</th>
<th>twinning rate</th>
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<td>13</td>
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<td>2011</td>
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<tr>
<td>2013</td>
<td>55</td>
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<td>2015</td>
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<td>23</td>
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<td>13%</td>
</tr>
<tr>
<td>2019</td>
<td>49</td>
<td>40</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>2-year average</td>
<td></td>
<td></td>
<td></td>
<td>16%</td>
</tr>
</tbody>
</table>
Proposal 95  Moose

- IM moose population objective has been met.
- Moose harvest objectives have not been met.
- 2-year average twinning rate is between 15-20%
- Additional harvest is available

### 19D East Moose Harvest

<table>
<thead>
<tr>
<th>Year</th>
<th>RM650</th>
<th>GM000</th>
<th>Total</th>
<th>Success</th>
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</thead>
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<td>134</td>
<td>53%</td>
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<tr>
<td>2012</td>
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<td>2</td>
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</tr>
<tr>
<td>2013</td>
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<tr>
<td>2014</td>
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<tr>
<td>2015</td>
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<td>20</td>
<td>162</td>
<td>59%</td>
</tr>
<tr>
<td>2016</td>
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<td>22</td>
<td>145</td>
<td>61%</td>
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<tr>
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<td>121</td>
<td>17</td>
<td>138</td>
<td>60%</td>
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<tr>
<td>2018</td>
<td>103</td>
<td>20</td>
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Proposal 95 Moose

- 19D East population estimate 8,540 moose
- IM plan harvest objective 180 from the wolf control area
- Wolf control area harvestable surplus 200 moose
- Current average harvest 130

Effect of the proposal

- Establish a resident winter moose hunt in 19D East

Department recommendation

- SUPPORT additional harvest but NEUTRAL on the allocative aspects of proposal

McGrath AC proposal

- Support with amendment
Proposal 96 19D East IM

- **Effect of the proposal**
  - Reauthorize the intensive management plan for Unit 19D East through June 2026

- **Department recommendation**
  - **SUPPORT**

- **Department proposal**

- **McGrath AC**
  - Support

---

Proposal 96 19D East IM

- **Proposed regulation:**
  - Re-authorize the IM Plan for Unit 19D East for 6 years
  - Includes public wolf control
  - Options for department bear and wolf control
  - Modify Unit 19D East
  - Modify wolf control focus area
  - Amend moose harvest objective
Proposal 96  

19D East IM

**History**

- Wolf predation control plan adopted 1995
- Department bear removals in 2003–2004
- Aerial wolf control 2003 – present
- Public bear snaring 2009-2014
Proposal 96 19D East IM

19D East MSA Data

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Proposal 96 19D East IM

19D East IM Population Objective
6,000 – 8,000 (0.7-0.9 moose/mi²)

19D East Population Estimate
8,540 (1.0 moose/mi²)
Proposal 96

19D East IM

19D East IM Harvest Objective
400 – 600 Moose

19D East Harvest RY10 – RY18
130 Moose/Year

Proposal 96

Twinning Data (BCFA)

<table>
<thead>
<tr>
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<th>Twins</th>
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<tr>
<td>2-year average</td>
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<td>16%</td>
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Proposal 96 19D East IM

**IM Plan Moose Objectives**

- Density Objective
  - 1 moose/mi² in WCFA

- Harvest Objective
  - 225 moose from WCFA
Proposal 96 19D East IM

92.123 paragraph (c) should correctly read “the Unit 19(D) East Predation Control Area is established and consists of those portions of the Kuskokwim River drainage within Unit 19(D) upstream from the Selatna River drainage, [AND] **but excluding** the Black River drainage,”

Wolf Population

- 198 wolves in 19D East in 2001
- 130 in wolf control focus area
Proposal 96 19D East IM

**Wolf Objectives**

- Reduce wolves by at least 60 – 80% in the WCFA
- Only removing wolves from the WCFA will ensure wolves persist in Unit 19D East

---

**Wolf take within the WCFA**

<table>
<thead>
<tr>
<th>RY</th>
<th>Hunting Trapping</th>
<th>Wolf control</th>
<th>Total removal</th>
<th>Spring Abundance</th>
<th>% Reduction</th>
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<td>19</td>
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### Black bear population BCFA

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<td>2013</td>
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<td>96</td>
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### Black bear population 19D East

<table>
<thead>
<tr>
<th>Location</th>
<th>Population estimate</th>
<th>Population Density (bears/1,000mi²)</th>
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<tbody>
<tr>
<td>19D East</td>
<td>1,700</td>
<td>200</td>
</tr>
</tbody>
</table>
### Black bear take from the BCFA

<table>
<thead>
<tr>
<th>RY</th>
<th>Hunting</th>
</tr>
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<tbody>
<tr>
<td>2014</td>
<td>15</td>
</tr>
<tr>
<td>2015</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>5</td>
</tr>
<tr>
<td>2017</td>
<td>8</td>
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<tr>
<td>2018</td>
<td>4</td>
</tr>
</tbody>
</table>

### Grizzly Bear Numbers

<table>
<thead>
<tr>
<th>Location</th>
<th>Population estimate</th>
<th>Population Density (bears/1,000mi²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19D East</td>
<td>128</td>
<td>15</td>
</tr>
<tr>
<td>BCFA</td>
<td>9</td>
<td>17</td>
</tr>
</tbody>
</table>
Proposal 96 | 19D East IM

**Grizzly bear take from the BCFA**

<table>
<thead>
<tr>
<th>RY</th>
<th>Hunting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2</td>
</tr>
<tr>
<td>2015</td>
<td>0</td>
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<tr>
<td>2016</td>
<td>2</td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
</tr>
<tr>
<td>2018</td>
<td>0</td>
</tr>
</tbody>
</table>

Proposal 96 | 19D East IM

**Bear Control**

- Consider future department conducted bear control if moose densities fall below 1.2 moose/mi² in the bear control area and twinning rates are above 20%.
Proposal 96 19D East IM

**Bear Objectives**

- Black bears in BCFA
  - lowest level possible

- Brown bears in BCFA
  - lowest level possible

**Twinning Rate Guidelines**

- When above 20% - promote growth
- When 15 – 20% - stabilize population
- When below 15% - reduce population
Proposal 96 19D East IM

- **Effect of the proposal**
  - Reauthorize the intensive management plan for Unit 19D East through June 2026
- **Department recommendation**
  - **SUPPORT**
- **Department proposal**
- **McGrath AC**
  - Support

Proposal 97 Moose

- **Effect of the proposal**
  - Change tier II permit (TM680) to a registration permit
- **Department recommendation**
  - **NEUTRAL** on allocation issues but **OPPOSED** as written because hunters are harvesting the maximum number of moose
- **Bethel AC proposal**
Proposal 97  Moose

Current Regulations

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Tier II permit TM680
  - 1 permit per household
  - Up to 300 permits

Proposal 97  Moose

Proposed Regulations

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Registration permit
  - Permits available in Units 18 and 19 before the hunt
  - No limit on the number of permits
Proposal 97  Moose

Regulatory History

- 2000 concerns of declining moose
- 2002 BOG shortened seasons
- 2002 Planning process initiated
  - Central Kuskokwim Moose Management Planning Committee
Proposal 97 Moose

Regulatory History

- RM640 moose permits
  - 1,031 permits in 2004
  - 1,086 permits in 2005
- 57% of all permits went to Unit 18 hunters and 39% went to Unit 19A hunters
- Approximately 82% of permittees hunted
- Average of 147 moose harvested annually
Proposal 97

Moose

Regulatory History

- Harvestable surplus was being exceeded under RM640
- 2006 closed eastern 19A excluding the LVMA
- TM680 established in western 19A

Proposal 97

Moose

Amounts Necessary for Subsistence

Positive C&T determination and ANS

- Unit 19 outside the LVMA 400-700 moose including:
  - 175-225 in Unit 19A
  - 20-24 in Unit 19B

- 30-40 in the LVMA portion of 19A

- Harvestable surplus for 19A outside LVMA 242
Proposal 97 Moose

Harvest Summary

- State Hunt 200 Permits (TM680)
  - Average 105 bulls/year RY15 – RY19
- Federal Hunt 100 Permits (FM1901)
  - Average 45 bulls/year RY15 – RY19
- Mortuary Moose Harvest
  - Average 10 moose/year

Moose Composition Data

<table>
<thead>
<tr>
<th>Regulatory year</th>
<th>Bulls: 100 Cows</th>
<th>Calves: 100 Cows</th>
<th>Percent calves</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005–2006</td>
<td>20</td>
<td>23</td>
<td>16%</td>
</tr>
<tr>
<td>2007–2008</td>
<td>28</td>
<td>52</td>
<td>29%</td>
</tr>
<tr>
<td>2008–2009</td>
<td>42</td>
<td>23</td>
<td>14%</td>
</tr>
<tr>
<td>2013–2014</td>
<td>38</td>
<td>41</td>
<td>23%</td>
</tr>
<tr>
<td>2016–2017</td>
<td>22</td>
<td>52</td>
<td>30%</td>
</tr>
<tr>
<td>2017–2018</td>
<td>20</td>
<td>64</td>
<td>35%</td>
</tr>
<tr>
<td>2018–2019</td>
<td>26</td>
<td>28</td>
<td>18%</td>
</tr>
</tbody>
</table>
Proposal 97  Moose

**TM680 Survey Results**

- 2010 western survey area 0.4 moose/mi²
- 2017 western survey area 1.3 moose/mi²

- 2010 TM680 0.3 moose/mi²
- 2017 TM680 0.7 moose/mi²
Proposal 97 Moose

2017 GSPE Population Results

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM680</td>
<td>5,735 mi²</td>
<td>4,135</td>
<td>0.7</td>
<td>165</td>
</tr>
<tr>
<td>RM682</td>
<td>3,419 mi²</td>
<td>1,932</td>
<td>0.6</td>
<td>77</td>
</tr>
<tr>
<td>19A</td>
<td>9,154 mi²</td>
<td>6,067</td>
<td>0.6</td>
<td>242</td>
</tr>
</tbody>
</table>

Major Points

- Currently harvesting 160 moose per year
- TM680 harvestable surplus 165 moose
- Two-year average bull:cow ratio 23:100
- **No additional harvest available in TM680 area**
- 19A harvestable surplus (242) is above ANS (175-225)
Proposal 97 Moose

**Department recommendation**
- Harvesting maximum number of animals available
- Concerns of increased harvest
- Estimate around 1000 permits would be issued
- Need to ensure harvest does not increase
- Need clear guidance on permit issuance

Proposal 97 Moose

**Effect of the proposal**
- Change tier II permit (TM680) to a registration permit

**Department recommendation**
- **NEUTRAL** on allocation issues but **OPPOSED** as written because hunters are harvesting the maximum number of moose

**Bethel AC proposal**
Proposal 98  Moose

- **Effect of the proposal**
  - Change tier II permit (TM680) to a registration permit

- **Department recommendation**
  - **NEUTRAL** on allocation issues but **OPPOSED** as written because hunters are harvesting the maximum number of moose

- **Public proposal**

---

Proposal 98  Moose

**Current Regulations**

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Tier II permit TM680
  - 1 permit per household
  - Up to 300 permits
Proposal 98 Moose

Proposed Regulations

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Registration permit
  - Permits available in Units 18 and 19 before the hunt
  - No limit on the number of permits
Proposal 98 Moose

Regulatory History

- 2000 concerns of declining moose
- 2002 BOG shortened seasons
- 2002 Planning process initiated
  - Central Kuskokwim Moose Management Planning Committee
### Proposal 98 Moose

**Regulatory History**

- RM640 moose permits
  - 1,031 permits in 2004
  - 1,086 permits in 2005
- 57% of all permits went to Unit 18 hunters and 39% went to Unit 19A hunters
- Approximately 82% of permittees hunted
- Average of 147 moose harvested annually

---

### Proposal 98 Moose

**Regulatory History**

- Harvestable surplus was being exceeded under RM640
- 2006 closed eastern 19A excluding the LVMA
- TM680 established in western 19A
Proposal 98 Moose

Amounts Necessary for Subsistence

Positive C&T determination and ANS
- Unit 19 outside the LVMA 400-700 moose including:
  - 175-225 in Unit 19A
  - 20-24 in Unit 19B
- 30-40 in the LVMA portion of 19A
- Harvestable surplus for 19A outside LVMA 242

Proposal 98 Moose

Harvest Summary

- State Hunt 200 Permits (TM680)
  - Average 105 bulls/year RY15 – RY19
- Federal Hunt 100 Permits (FM1901)
  - Average 45 bulls/year RY15 – RY19
- Mortuary Moose Harvest
  - Average 10 moose/year
Proposal 98 Moose Composition Data

<table>
<thead>
<tr>
<th>Regulatory year</th>
<th>Bulls: 100 Cows</th>
<th>Calves: 100 Cows</th>
<th>Percent calves</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005–2006</td>
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<td>23</td>
<td>14%</td>
</tr>
<tr>
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<td>38</td>
<td>41</td>
<td>23%</td>
</tr>
<tr>
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<td>52</td>
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<td>35%</td>
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<td>28</td>
<td>18%</td>
</tr>
</tbody>
</table>
Proposal 98

**Moose**

**TM680 Survey Results**

- 2010 western survey area 0.4 moose/mi²
- 2017 western survey area 1.3 moose/mi²
- 2010 TM680 0.3 moose/mi²
- 2017 TM680 0.7 moose/mi²

**2017 GSPE Population Results**

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area (mi²)</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM680</td>
<td>5,735</td>
<td>4,135</td>
<td>0.7</td>
<td>165</td>
</tr>
<tr>
<td>RM682</td>
<td>3,419</td>
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<td>0.6</td>
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<tr>
<td>19A</td>
<td>9,154</td>
<td>6,067</td>
<td>0.6</td>
<td>242</td>
</tr>
</tbody>
</table>
Proposal 98 Moose

**Major Points**

- Currently harvesting 160 moose per year
- TM680 harvestable surplus 165 moose
- Two-year average bull:cow ratio 23:100
- **No additional harvest available in TM680 area**
- 19A harvestable surplus (242) is above ANS (175-225)

---

Proposal 98 Moose

- **Department recommendation**
  - Harvesting maximum number of animals available
  - Concerns of increased harvest
  - Estimate around 1000 permits would be issued
  - Need to ensure harvest does not increase
  - Need clear guidance on permit issuance
Proposal 98

**Moose**

- **Effect of the proposal**
  - Change tier II permit (TM680) to a registration permit
- **Department recommendation**
  - NEUTRAL on allocation issues but **OPPOSED** as written because hunters are harvesting the maximum number of moose
- **Public proposal**

Proposal 99

**Moose**

- **Effect of the proposal**
  - Change the tier II permit (TM680) to a household permit
- **Department recommendation**
  - NEUTRAL
- **Central Kuskokwim AC proposal**
Proposal 99 Moose

**Current Regulations**

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Tier II permit TM680
  - Individual permit with only 1 permit/household
  - Up to 300 permits

---

Proposal 99 Moose

**Proposed Regulations**

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20
  - 1 antlered bull
  - Tier II household permit
  - Up to 300 permits
Proposal 99

Harvest Summary

- State Hunt 200 Permits (TM680)
  - Average 105 bulls/year RY15 – RY19

- Federal Hunt 100 Permits (FM1901)
  - Average 45 bulls/year RY15 – RY19

- Mortuary Moose Harvest
  - Average 10 moose/year
Proposal 99  Moose

- **Effect of the proposal**
  - Change the tier II permit (TM680) to a household permit
- **Department recommendation**
  - NEUTRAL
- **Central Kuskokwim AC proposal**

Proposal 100  Moose

- **Effect of the proposal**
  - Extend resident season dates for moose hunting in 19A remainder
- **Department recommendation**
  - OPPOSED
- **Public proposal**
  - Opposed
  - Stony Holitna AC
  - Opposed
Proposal 100 Moose

Current Regulations

- Unit 19A remainder
  - Sept 1 – Sept 5
  - 1 antlered bull
  - Registration permit RM682
  - Up to 75 permits
  - Holitna/Hoholitna Controlled Use Area

Proposal 100 Moose

Permit Conditions

- Available in person in Sleetmute and Stony River during month of July
- Only one permit per household
- May not hold any other moose hunting permits on the Kuskokwim River
- Proxy hunting is not allowed
- Reporting required by Sept 20
Proposal 100 Moose

Proposal Regulations

- Unit 19A remainder
  - Sept 1 – Sept 30
  - 1 antlered bull
  - Registration permit RM682
  - Up to 75 permits
  - Holitna/Hoholitna Controlled Use Area
Proposal 100

Moose

2019 Harvest Data RM682

- 30 permits issued
- 19 hunted
- 8 killed (42% success)
  - 6 Holitna
  - 2 Stony

Proposal 100

Moose

2017 GSPE Population Results

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM682</td>
<td>3,419 mi²</td>
<td>1,932</td>
<td>0.6</td>
<td>77</td>
</tr>
<tr>
<td>BCFA</td>
<td>534 mi²</td>
<td>728</td>
<td>1.4</td>
<td>29</td>
</tr>
</tbody>
</table>
Proposal 100 Moose

Composition Data

<table>
<thead>
<tr>
<th>Regulatory Year</th>
<th>Calves: 100 Cows</th>
<th>Bulls: 100 Cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013–2014</td>
<td>50</td>
<td>55</td>
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<tr>
<td>2016–2017</td>
<td>55</td>
<td>58</td>
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<tr>
<td>2017–2018</td>
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<td>36</td>
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<tr>
<td>2018–2019</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>2019–2020</td>
<td>21</td>
<td>40</td>
</tr>
</tbody>
</table>

Proposal 100 Moose

Points To Consider

- RM682 hunt area was closed for 13 years
- Moose numbers have improved but the harvestable surplus is small (~30 moose)
- Board actions to open hunt were deliberately conservative
- Local support was contingent upon a conservative hunt
- Need several years of data to assess harvest before changes are made
Proposal 100  Moose

- **Effect of the proposal**
  - Extend resident season dates for moose hunting in 19A remainder

- **Department recommendation**
  - **OPPOSED**

- **Public proposal**
- **Stony Holitna AC**
  - Opposed

Proposal 101  CUA

- **Effect of the proposal**
  - Remove the 40-horsepower restriction in the Holitna-Hoholitna controlled use area in 19A

- **Department recommendation**
  - **NEUTRAL**

- **Public proposal**
- **Stony Holitna AC**
  - Opposed
Proposal 101 CUA

Current Regulation

- Closed to the use of any boat equipped with a motor in excess of 40 horse-power for taking big game, from August 1 – November 1.
Proposal 101 CUA

Proposed Regulation

- Remove horsepower restriction in the Unit 19A portion of Holitna-Hoholitna controlled use area

- RM640 moose permits
  - 1,031 permits in 2004
  - 1,086 permits in 2005

- 57% of all permits went to unit 18 hunters and 39% went to Unit 19A hunters

- Approximately 82% of permittees hunted
Proposal 101

CUA

**Background**

- The board created the CUA to reduce user conflicts
- The board has consistently upheld the CUA and similar proposals failed in 1994, 2004, 2008 and 2017
- The board recently opened a hunt for the first time since 2005

---

**Proposal 101**

**CUA**

- **Effect of the proposal**
  - Remove the 40-horsepower restriction in the Holitna-Hoholitna controlled use area in 19A

- **Department recommendation**
  - **NEUTRAL**

- **Public proposal**

- **Stony Holitna AC**
  - Opposed
Proposal 102 Moose

Effect of the proposal
- Shift the season dates for TM680

Department recommendation
- NEUTRAL

Public proposal

Current Regulations/Proposed Regulations

- Unit 19A downstream from and including the George River and downstream from and excluding Downey Creek
  - Sept 1 – Sept 20/Sept 5 – Sept 25
  - 1 antlered bull
  - Tier II permit TM680
  - Up to 300 permits
**Proposal 102**

**Moose**

**Harvest Summary**

- **State Hunt 200 Permits (TM680)**
  - Average 105 bulls/year RY15 – RY19

- **Federal Hunt 100 Permits (FM1901)**
  - Average 45 bulls/year RY15 – RY19

- **Mortuary Moose Harvest**
  - Average 10 moose/year
### Proposal 102

#### Moose

### 2017 GSPE Population Results

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
</tr>
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<tbody>
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<td>TM680</td>
<td>5,735 mi²</td>
<td>4,135</td>
<td>0.7</td>
<td>165</td>
</tr>
</tbody>
</table>

### Moose Composition Data

<table>
<thead>
<tr>
<th>Regulatory year</th>
<th>Bulls:100 Cows</th>
<th>Calves: 100 Cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005–2006</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>2007–2008</td>
<td>28</td>
<td>52</td>
</tr>
<tr>
<td>2008–2009</td>
<td>42</td>
<td>23</td>
</tr>
<tr>
<td>2013–2014</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>2016–2017</td>
<td>22</td>
<td>52</td>
</tr>
<tr>
<td>2017–2018</td>
<td>20</td>
<td>64</td>
</tr>
<tr>
<td>2018–2019</td>
<td>26</td>
<td>28</td>
</tr>
</tbody>
</table>
Proposal 102  Moose

**Major Points**

- Currently harvesting 160 moose per year
- Harvestable surplus 165 moose
- Two-year average bull:cow ratio 23:100
- Shift in season dates would increase harvest
- **No additional harvest available in TM680 area**
Proposal 102  Moose

- **Effect of the proposal**
  - Shift the season dates for TM680

- **Department recommendation**
  - NEUTRAL

- **Public proposal**

Proposal 103  Moose

- **Effect of the proposal**
  - Establish a tier II hunt in 19A remainder if harvestable surplus falls below the lower range of ANS

- **Department recommendation**
  - NEUTRAL

- **Public proposal**
- **Stony Holitna AC**
  - Opposed
Proposal 103  Moose

Current Regulations

- Unit 19A remainder
  - Sept 1 – Sept 5
  - 1 antlered bull
  - Registration permit RM682
  - Up to 75 permits
  - Holitna/Hoholitna Controlled Use Area
Proposal 103  Moose

Board Findings (2019-225-BOG)

1. Registration permits for moose in the remainder of Unit 19A will be available in person in communities in the hunt area only, during the month of July, and only one permit is allowed per household.

2. A person holding a permit for this hunt may not hold another moose permit in the Kuskokwim River drainage for that regulatory year.

3. 30 permits will be issued the first year. Up to 75 permits may be issued in subsequent years at the department's discretion. In exercising this discretion, the department should consider the harvestable portion of the moose population, the success of hunters in harvesting moose under these permits, and the potential for overhunting that could result in a population decline.

4. If the 2-year average bull:cow ratio decreases below 35:100 the hunt will close until a 2-year average bull:cow ratio is at least 35:100 within the hunt area.

5. If the harvestable portion of the population decreases below the lower range of the amount reasonably necessary for subsistence for 19A, the hunt will close until the harvestable portion reaches the minimum ANS for 19A.

6. No proxy hunting will be permitted for this hunt.

---

Proposal 103  Moose

Proposed Regulations

- Unit 19A remainder
  - Sept 1 – Sept 5
  - 1 antlered bull
  - Registration permit RM682
  - Up to 75 permits
  - Holitna/Hoholitna Controlled Use Area
  - Area will go to tier II if harvestable portion is below the lower range of the ANS
Proposal 103  Moose

Amounts Necessary for Subsistence

Positive C&T determination and ANS
- Unit 19 outside the LVMA 400-700 moose including:
  - 175-225 in Unit 19A
  - 20-24 in Unit 19B
- 30-40 in the LVMA portion of 19A

Proposal 103  Moose

2017 GSPE Population Results

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area (mi²)</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
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<td>0.6</td>
<td>77</td>
</tr>
<tr>
<td><strong>19A</strong></td>
<td><strong>9,154</strong></td>
<td><strong>6,067</strong></td>
<td><strong>0.6</strong></td>
<td><strong>242</strong></td>
</tr>
</tbody>
</table>
Proposal 103

Points to consider

- RM682 hunt area was closed for 13 years
- Board actions to open hunt were deliberately conservative
- Local support was contingent upon sideboards including returning to a closure rather than tier II

Effect of the proposal

- Establish a tier II hunt in 19A remainder if harvestable surplus falls below the lower range of ANS

Department recommendation

- NEUTRAL

Public proposal

- Stony Holitna AC
  - Opposed
Proposal 104 19A IM

- **Effect of the proposal**
  - Reauthorize the intensive management plan for Unit 19A through June 2026
- **Department recommendation**
  - SUPPORT
- **Department proposal**
  - Stony Holitna AC
    - Support

---

Proposal 104 19A IM

- **Proposed regulation:**
  - Re-authorize the IM Plan for Unit 19A for 6 years
  - Includes public wolf control
  - Options for department bear and wolf control
  - Amend moose harvest objective
Proposal 104 19A IM

- 2004 wolf predation control plan in 19A and 19B
- 2006 revised to include just 19A
- 2009 reauthorized in just eastern 19A
- 2012 amended to include department conducted bear control
- 2014 reauthorized for 6 years
**Proposal 104 19A IM**

**19A East Moose Survey Data**

<table>
<thead>
<tr>
<th>Year</th>
<th>Moose</th>
<th>Moose/mi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,285</td>
<td>0.3</td>
</tr>
<tr>
<td>2008</td>
<td>1,715</td>
<td>0.4</td>
</tr>
<tr>
<td>2011</td>
<td>1,715</td>
<td>0.4</td>
</tr>
<tr>
<td>2017</td>
<td>2,165</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Proposal 104 19A IM**

**Composition Data Unit 19A BCFA**

<table>
<thead>
<tr>
<th>Regulatory Year</th>
<th>Calves: 100 Cows</th>
<th>Bulls: 100 Cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010–2011</td>
<td>19</td>
<td>48</td>
</tr>
<tr>
<td>2011–2012</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>2013–2014</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>2016–2017</td>
<td>55</td>
<td>58</td>
</tr>
<tr>
<td>2017–2018</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>2018–2019</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>2019–2020</td>
<td>21</td>
<td>40</td>
</tr>
</tbody>
</table>
**Proposal 104**

**19A IM**

**Twinning Data (BCFA)**

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Singletons</th>
<th>Twins</th>
<th>Twinning Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>41</td>
<td>18</td>
<td>23</td>
<td>56%</td>
</tr>
<tr>
<td>2014</td>
<td>48</td>
<td>18</td>
<td>30</td>
<td>63%</td>
</tr>
<tr>
<td>2018</td>
<td>40</td>
<td>14</td>
<td>26</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>64%</strong></td>
</tr>
</tbody>
</table>

---

**19A IM Population Objective**

7,600 – 9,300 (0.8-0.9 moose/mi²)

**19A Population Estimate**

6,300 (0.6 moose/mi²)
Proposal 104

19A IM

19A IM Harvest Objective
400 – 550 Moose

19A Harvest RY19
175 Moose

Overview:

1. **Density Objective**
   - 1 moose/mi² in WCFA

2. **Harvest Objective**
   - 155 moose from WCFA
Proposal 104 19A IM

**Pre-control Wolf population**

- 150 wolves in 19A in 2006
- 75 in wolf control focus area

**Wolf objectives**

- Reduce wolves by at least 60 – 80% in the WCFA
- Only removing wolves from the WCFA will ensure wolves persist in Unit 19A
### Proposal 104

#### Wolf take within the WCFA

<table>
<thead>
<tr>
<th>RY</th>
<th>Hunting</th>
<th>Trapping</th>
<th>Wolf control</th>
<th>Total removal</th>
<th>Spring Abundance</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>10</td>
<td>11</td>
<td>19</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td></td>
<td>8</td>
<td>8</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>22</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>24</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>20</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>14</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td>60</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

#### Black bear population 19A

<table>
<thead>
<tr>
<th>Location</th>
<th>Population estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>19A</td>
<td>2,500 – 3,000</td>
</tr>
<tr>
<td>BCFA (pre-control)</td>
<td>92 – 102</td>
</tr>
</tbody>
</table>
### Proposal 104 19A IM

#### Grizzly bear population 19A

<table>
<thead>
<tr>
<th>Location</th>
<th>Population Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>19A</td>
<td>180 – 210</td>
</tr>
<tr>
<td>BCFA (pre-control)</td>
<td>10 – 15</td>
</tr>
</tbody>
</table>

#### Bear control

<table>
<thead>
<tr>
<th>Year</th>
<th>Black Bear</th>
<th>Grizzly Bear</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>84</td>
<td>5</td>
</tr>
<tr>
<td>2014</td>
<td>54</td>
<td>10</td>
</tr>
</tbody>
</table>
Proposal 104 19A IM

**Grizzly bear take from the BCFA**

<table>
<thead>
<tr>
<th>RY</th>
<th>Hunting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1</td>
</tr>
<tr>
<td>2015</td>
<td>1</td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
</tr>
<tr>
<td>2018</td>
<td>0</td>
</tr>
</tbody>
</table>

Proposal 104 19A IM

**Bear Control**

- Consider future department conducted bear control if densities fall below 1.2 moose/mi² in the bear control area and twinning rates are above 20%
Proposal 104 19A IM

**Bear Objectives**

- Black bears in BCFA
  - lowest level possible
- Brown bears in BCFA
  - lowest level possible

Proposal 104 19A IM

**Twinning rate guidelines**

- When above 20% - promote growth
- When 15 – 20% - stabilize population
- When below 15% - reduce population
Proposal 104 19A IM

- **Effect of the proposal**
  - Reauthorize the intensive management plan for Unit 19A through June 2026
- **Department recommendation**
  - SUPPORT
- **Department proposal**
- **Stony Holitna AC**
  - Support

Proposal 105 19A IM

- **Effect of the proposal**
  - Authorize predator control for wolves and bears in Unit 19A
- **Department recommendation**
  - NEUTRAL
- **Central Kuskokwim AC proposal**
Proposal 105  19A IM

- 2004 wolf predation control plan in 19A and 19B
- 2006 revised to include just 19A
- 2009 reauthorized in just eastern 19A
Reasons wolf control did not work downriver of Sleetmute:
-It’s not just one thing-

1. Land ownership
2. Topography
3. Weather and snow conditions
4. Other factors
Proposal 105 19A IM

1. Land Status

MAP 1: Unit 19A Wolf Control Area

2. Topography

MAP 1: Unit 19A Wolf Control Area
Proposal 105

3. Weather and snow conditions

4. Other factors

- High fuel costs
- Pilot availability
- Logistics
  - long way to Aniak
  - lodging difficult/expensive
  - food
  - tie downs and electricity
Proposal 105

19A IM Population Objective
7,600 – 9,300 (0.8-0.9 moose/mi²)

19A Population Estimate
6,300 (0.6 moose/mi²)

Proposal 105

19A IM Harvest Objective
400 – 550 Moose

19A Harvest RY19
175 Moose
Proposal 105 19A IM

**TM680 Survey Results**

- 2010 western survey area 0.4 moose/mi²
- 2017 western survey area 1.3 moose/mi²
- 2010 TM680 0.3 moose/mi²
- 2017 TM680 0.7 moose/mi²

Proposal 105 19A IM

**Harvest Summary**

- State Hunt 200 Permits (TM680)
  - Average 105 bulls/year RY15 – RY19
- Federal Hunt 100 Permits (FM1901)
  - Average 45 bulls/year RY15 – RY19
- Mortuary Moose Harvest
  - Average 10 moose/year
Proposal 105 19A IM

Harvest Potential

- Currently 200 tier II permits are issued and last year 276 people applied

- RM640 moose permits
  - 1,031 permits in 2004
  - 1,086 permits in 2005

- More demand than permits available

Proposal 105 19A IM

Summary:

- Land access has changed, but there are still large areas of federal land which are not accessible

- Weather and snow are typically not good in this area

- Pilot availability may be a significant challenge
Proposal 105 19A IM

- **Effect of the proposal**
  - Authorize predator control for wolves and bears in Unit 19A
- **Department recommendation**
  - NEUTRAL
- **Central Kuskokwim AC proposal**

Proposal 106 19A IM

- **Effect of the proposal**
  - Expand the bear control area to include the LVMA
- **Department recommendation**
  - NEUTRAL
- **Stony Holitna AC proposal**
  - Support
Proposal 106 19A IM

- 2004 wolf control began in Unit 19A including LVMA
- 2009 reauthorized in just eastern 19A
- 2012 amended to include department conducted bear control in the BCFA
- 2014 reauthorized for 6 years
Proposal 106 19A IM

**19A IM Population Objective**
7,600 – 9,300 (0.8-0.9 moose/mi²)

**19A Population Estimate**
6,300 (0.6 moose/mi²)

Proposal 106 19A IM

**19A IM Harvest Objective**
400 – 550 Moose

**19A Harvest RY19**
175 Moose
Proposal 106 19A IM

19A East Moose Survey Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Moose</th>
<th>Moose/mi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,285</td>
<td>0.3</td>
</tr>
<tr>
<td>2008</td>
<td>1,715</td>
<td>0.4</td>
</tr>
<tr>
<td>2011</td>
<td>1,715</td>
<td>0.4</td>
</tr>
<tr>
<td>2017</td>
<td>2,165</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Proposal 106 19A IM

2017 GSPE Population Results

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Area</th>
<th>Total Moose (w/SCF)</th>
<th>Density</th>
<th>Harvestable Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM680</td>
<td>5,735 mi²</td>
<td>4,135</td>
<td>0.7</td>
<td>165</td>
</tr>
<tr>
<td>LVMA</td>
<td>870 mi²</td>
<td>232</td>
<td>0.3</td>
<td>10</td>
</tr>
<tr>
<td>RM682</td>
<td>3,419 mi²</td>
<td>1,932</td>
<td>0.6</td>
<td>77</td>
</tr>
<tr>
<td>19A</td>
<td>10,024 mi²</td>
<td>6,300</td>
<td>0.6</td>
<td>252</td>
</tr>
</tbody>
</table>
### Composition Data Unit 19A BCFA

<table>
<thead>
<tr>
<th>Regulatory Year</th>
<th>Calves: 100 Cows</th>
<th>Bulls: 100 Cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010–2011</td>
<td>19</td>
<td>48</td>
</tr>
<tr>
<td>2011–2012</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>2013–2014</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>2016–2017</td>
<td>55</td>
<td>58</td>
</tr>
<tr>
<td>2017–2018</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>2018–2019</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>2019–2020</td>
<td>21</td>
<td>40</td>
</tr>
</tbody>
</table>

### Twinning Data (BCFA)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Singletons</th>
<th>Twins</th>
<th>Twinning Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>41</td>
<td>18</td>
<td>23</td>
<td>56%</td>
</tr>
<tr>
<td>2014</td>
<td>48</td>
<td>18</td>
<td>30</td>
<td>63%</td>
</tr>
<tr>
<td>2018</td>
<td>40</td>
<td>14</td>
<td>26</td>
<td>65%</td>
</tr>
<tr>
<td>2-year average</td>
<td>40</td>
<td>14</td>
<td>26</td>
<td>64%</td>
</tr>
</tbody>
</table>
Proposal 106 19A IM

Harvest Summary

- 7 Permits (TM684)
  - Average 2 bulls/year RY09 – RY18

Effect of the proposal
- Expand the bear control area to include the LVMA

Department recommendation
- NEUTRAL

Stony Holitna AC proposal
- Support
Proposal 107 Moose

- **Effect of the proposal**
  - Establish a resident winter moose hunt in Unit 21E
- **Department recommendation**
  - **SUPPORT** additional harvest but **NEUTRAL** on the allocative aspects of proposal
- **GASH AC proposal**

Current Unit 21E Resident Moose Hunting Regulations:

**RM836**
- Sept 1 – Sept 25
Proposal 107

Moose

**Proposed changes: establish a winter hunt in 21E**

- Residents only
- Feb 15 – March 15
- Registration permits available in the hunt area and online
- Any moose except cows with calves
- Aircraft restrictions within Paradise Controlled Use Area
- Quota set by the department

---

**Proposal 107**

21E Moose Survey Area
**Proposal 107**

**Moose**

### 21E Moose Survey Area

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate with SCF</th>
<th>Moose/mi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>5,398</td>
<td>1.3</td>
</tr>
<tr>
<td>2016</td>
<td>8,372</td>
<td>2.0</td>
</tr>
<tr>
<td>2019</td>
<td>8,607</td>
<td>2.1</td>
</tr>
</tbody>
</table>

### 21E Composition Data

<table>
<thead>
<tr>
<th>Regulatory year</th>
<th>Bulls:100 Cows</th>
<th>Calves: 100 Cows</th>
<th>Percent calves</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010–2011</td>
<td>61</td>
<td>51</td>
<td>24</td>
</tr>
<tr>
<td>2011–2012</td>
<td>64</td>
<td>47</td>
<td>22</td>
</tr>
<tr>
<td>2016–2017</td>
<td>40</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>2017–2018</td>
<td>24</td>
<td>38</td>
<td>23</td>
</tr>
<tr>
<td>2018–2019</td>
<td>42</td>
<td>17</td>
<td>11</td>
</tr>
</tbody>
</table>
### Holy Cross Area Twinning

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Calves</th>
<th>Cows w/calves</th>
<th>Twins</th>
<th>Twinning Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>30%</td>
<td>44</td>
<td>16</td>
<td>36%</td>
</tr>
<tr>
<td>2017</td>
<td>31%</td>
<td>104</td>
<td>30</td>
<td>27%</td>
</tr>
<tr>
<td>2018</td>
<td>17%</td>
<td>66</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>2019</td>
<td>29%</td>
<td>80</td>
<td>11</td>
<td>14%</td>
</tr>
<tr>
<td>2-year average</td>
<td></td>
<td></td>
<td></td>
<td>12%</td>
</tr>
</tbody>
</table>

### Shageluk Area Twinning

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Calves</th>
<th>Cows w/calves</th>
<th>Twins</th>
<th>Twinning Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>26%</td>
<td>23</td>
<td>7</td>
<td>30%</td>
</tr>
<tr>
<td>2017</td>
<td>35%</td>
<td>50</td>
<td>24</td>
<td>48%</td>
</tr>
<tr>
<td>2018</td>
<td>27%</td>
<td>54</td>
<td>16</td>
<td>30%</td>
</tr>
<tr>
<td>2019</td>
<td>46%</td>
<td>58</td>
<td>20</td>
<td>34%</td>
</tr>
<tr>
<td>2-year average</td>
<td></td>
<td></td>
<td></td>
<td>32%</td>
</tr>
</tbody>
</table>
Proposal 107 Moose

Current 21E IM guidelines for managing moose population growth

- Population objective in the WCFA 1 moose/mi²
- >20% twinning promote growth
- 15-20% twinning stabilize population through harvest
- <15% twinning reduce population through harvest

Proposal 107 Moose

21E IM Population Objective
9,000 – 11,000 (1.1-1.4 moose/mi²)

21E Population Estimate
9,777 (1.2 moose/mi²)
Proposal 107  Moose

21E IM Harvest Objective
550 – 1,100 Moose

21E Harvest RY19
190 Moose

- IM moose population objective has been met
- IM moose harvest objective has not been met
- Time to stabilize the population
- Additional harvest is available
Proposal 107  Moose

- **Effect of the proposal**
  - Establish a resident winter moose hunt in Unit 21E
- **Department recommendation**
  - SUPPORT additional harvest but NEUTRAL on the allocative aspects of proposal
- **GASH AC proposal**

Proposal 108  Moose

Establish check stations and require trophy destruction of moose antlers for RM836 in 21E

Department Recommendation: Neutral

Proposed by: Member of Public
**Proposal 108**
**Moose**

**Current Regulations for GMU 21E**

**Residents 21E:**
One antlered bull by registration permit (RM836) from September 1-25

**Nonresidents 21E:**
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by drawing permit (DM837/DM839) September 5-25

---

**Proposal 108**
**Moose**

**Proposed Regulations**

- Alaska residents who harvest a moose with RM836 must destroy the trophy value of their antlers by cutting at least one antler in half

- Mandatory check stations in Grayling, Anvik, Shageluk, or Holy Cross
Proposal 108 Moose

Unit 21E

- Pink shaded area represents Paradise Controlled Use Area (PCUA)
- Includes villages of Grayling, Anvik, Shageluk, and Holy Cross (GASH)

Concerns from Proponent

- Local moose hunters compete with “nonresident hunters”
- Competition between hunters push locals outside the PCUA
- Amount necessary for subsistence (ANS) is not being met
- Moose densities cannot support current harvest pressure
### Proposal 108
#### Moose

#### 21E Moose Population
- 21E population estimate: **9,777** moose
- 2019 Moose densities: **1.2 moose/mi² (SCF)**
- Positive C&T finding
- ANS finding of **600-800** moose in all of Unit 21
- 21E Harvestable surplus: **390** moose

#### Harvest 2014-2018
- Average annual harvest of **169** moose under RM836
- Combined average annual harvest of **23** moose under nonresident draw permits
  - DM837(35 permits)
  - DM839(15 permits)
- Combined average annual harvest of about **190** moose taken from 21E over last 5 years
### Proposal 108 Moose

#### Unit 21 Harvest

<table>
<thead>
<tr>
<th>Unit</th>
<th>Avg Annual Harvest (rept + est. unrept)</th>
<th>Moose Population Estimate</th>
<th>Can Population Provide for Current level of harvest?</th>
<th>Harvestable Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>21A</td>
<td>75 (45 + 30)</td>
<td>2,442</td>
<td>yes</td>
<td>120</td>
</tr>
<tr>
<td>21B</td>
<td>101 (76 + 25)</td>
<td>2,317 (±417)</td>
<td>yes</td>
<td>95</td>
</tr>
<tr>
<td>21C</td>
<td>27 (22 + 5)</td>
<td>900-1300 extrapolated est. (0.25-0.35 moose/mi²)</td>
<td>yes</td>
<td>45</td>
</tr>
<tr>
<td>21D</td>
<td>412 (287 + 125)</td>
<td>10,478 (±1,572)</td>
<td>yes</td>
<td>445</td>
</tr>
<tr>
<td>21E</td>
<td>190 (180 + 10)</td>
<td>9,777</td>
<td>yes</td>
<td>390</td>
</tr>
<tr>
<td>Total</td>
<td>805 (610 + 195)</td>
<td>9,777</td>
<td></td>
<td>1,095</td>
</tr>
<tr>
<td>Combined ANS</td>
<td>600-800</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 21E Moose Harvest

- **21E Harvestable Surplus**: (390)
Proposal 108
Moose

Check Station Considerations

- Instituted for obtaining biological samples
- They cannot be used for enforcement
- Volunteers have no enforcement authority

Proposal 108
Moose

Summary

- Moose densities in 21E increasing
- Annual harvest *does not exceed* harvestable surplus in 21E
- Harvestable surplus (1,095) in Unit 21 is *greater* than ANS (600-800)
- Restrictions would only apply to Alaska residents holding RM836 registration permits
  - Nonresidents cannot hold this permit
Proposal 108
Moose

Establish check stations and require trophy destruction of moose antlers for RM836 in 21E

Department Recommendation: Neutral

Proposed by: Public

Proposal 109
Moose

Change the general season moose hunt in Unit 21A to a registration hunt.

Department Recommendation: Neutral

Proposed By:
McGrath AC & GASH AC

McGrath AC : Support
Proposal 109
Moose

Current Regulations 21A:

- **Residents** - One antlered bull by harvest ticket September 5 - September 25

- **Nonresidents** - One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket September 5 - September 25

Proposal 109
Moose

Proposed Regulations

- Both resident and non-resident hunters would be required to possess a registration permit instead of a harvest ticket to hunt moose in 21A

- Seasons and bag limits would remain the same
Proposal 109
Moose

21A Harvest

- 5 year annual average moose harvest: 60 moose

- Possible under reporting occurring:
  - Interviews with hunters, Alaska Wildlife Troopers, and harvest data
  - 60-70% reporting
Proposal 109
Moose

Using 21E as a Similar Model

- 2014: GASH AC put forth a similar proposal that was adopted in 21E

- Post 2014 reported harvest almost doubled in 21E after RM836 institution

- We suspect a similar effect may take place in 21A if proposal is adopted
### Proposal 109

#### Moose

**2009-2018 Resident Harvest in 21E**

- **Moose Harvest**
  - **Resident Harvest**
  - **AVG 95.6**
  - **AVG 180.2**

- **Regulatory Year**
  - 2009: 98
  - 2010: 99
  - 2011: 96
  - 2012: 86
  - 2013: 99
  - 2014: 216
  - 2015: 147
  - 2016: 178
  - 2017: 177
  - 2018: 183

---

### Summary

- Possible under reporting occurring
- Board may wish to consider if institution of registration permit would affect subsistence opportunity
- 21A harvest is likely higher than reported
- Better reporting helps the Department make informed management decisions
Proposal 109
Moose

Change the general season moose hunt in Unit 21A to a registration hunt

Department Recommendation: Neutral

Proposed by: McGrath AC & GASH AC

McGrath AC: Support

Proposal 110
Moose

Allow Proxy Hunting for Moose in Unit 19D

Department Recommendation: Neutral

Proposed By: McGrath AC

McGrath AC: Support
Proposal 110
Moose

Proposed Regulations

• This regulation would amend 92.011(k) (3) to allow proxy hunting in Unit 19D under a “one antlered bull” bag limit

Proposal 110
Moose

Current Regulations

• Proxy hunting is allowed by State residents for moose in Tier II hunts, “any-bull hunts”, and “antlerless moose hunts.”

• In Unit 19D residents may harvest “one antlered bull” by harvest ticket or registration permit
  • Not eligible for proxy hunting
## Proposal 110
### Moose

### Previous Considerations

- Previously "one antlered bull" bag limits were not considered antler restrictions
- Proxy hunting was allowed in 19D
- Interpretation not consistent with codified

### Considerations

- Proxy hunting in "one antlered bull hunts" is not permitted
- McGrath AC wishes to allow proxy hunting in 19D and maintain "one antlered bull" bag limit
<table>
<thead>
<tr>
<th>Proposal 110</th>
<th>Moose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow Proxy Hunting for Moose in Unit 19D</td>
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<tr>
<td>Department Recommendation: Neutral</td>
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<tr>
<td>Proposed by: McGrath AC</td>
<td></td>
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<tr>
<td>McGrath AC: Support</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Proposal 111</th>
<th>Moose</th>
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</thead>
<tbody>
<tr>
<td>Allow proxy hunting for moose in 21A &amp; 21E</td>
<td></td>
</tr>
<tr>
<td>Department Recommendation: Neutral</td>
<td></td>
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<tr>
<td>Proposed by: GASH AC</td>
<td></td>
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<tr>
<td>McGrath AC: Support</td>
<td></td>
</tr>
</tbody>
</table>
Proposal 111
Moose

Proposed Regulations

• This regulation would amend 92.011(k) (3) to allow proxy hunting in Unit 21A & 21E under a “one antlered bull” bag limit

Proposal 111
Moose

Current Regulations

- Proxy hunting allowed in Tier II hunts, “any-bull hunts”, and “antlerless moose hunts”

- Unit 21A residents may harvest “one antlered bull” by harvest ticket Sept. 5–25

- Unit 21E residents may harvest “one antlered bull” by registration permit Sept. 1–25
Proposal 111
Moose

Previous Considerations

- Previously “one antlered bull” bag limits were not considered antler restrictions
- Proxy hunting was allowed in 21A & 21E under this interpretation
- Interpretation not consistent with codified

Proposal 111
Moose

Considerations

- Proxy hunting in “one antlered bull hunts” is not permitted
- GASH AC wishes to allow proxy hunting in 21A & 21E and maintain a “one antlered bull” bag limit
Proposal 111
Moose

Allow proxy hunting for moose in 21A & 21E

Department Recommendation: Neutral

Proposed by: GASH AC

McGrath AC: Support

Proposal 112
Moose

Change the moose harvest ticket requirement to a registration permit within the Farewell portion of Unit 19C

Department Recommendation: Support

Proposed By: McGrath AC

McGrath AC: Support
Proposal 112
Moose

Current Regulations

Unit 19C

• **Residents**: One bull moose with spike fork or 50-inch antlers, or antlers with 4 brow tines on at least one side with a harvest ticket during September 1–20

• **Nonresidents**: One bull moose, 50-inch antlers or antlers with 4 brow tines on at least one side with a harvest ticket during September 1–20

Proposed Regulations

• Require a *registration permit* in the Farewell portion of 19C

• Season and bag limits would remain the same for both resident and nonresident moose hunters
Proposal 112
Moose

19C Composition Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Moose</th>
<th>% Calves</th>
<th>Calf:cow</th>
<th>Bull:Cow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>312</td>
<td>17%</td>
<td>27:100</td>
<td>29:100</td>
</tr>
<tr>
<td>2016</td>
<td>189</td>
<td>13%</td>
<td>20:100</td>
<td>22:100</td>
</tr>
<tr>
<td>2017</td>
<td>322</td>
<td>17%</td>
<td>28:100</td>
<td>38:100</td>
</tr>
<tr>
<td>2018</td>
<td>544</td>
<td>12.5%</td>
<td>20:100</td>
<td>40:100</td>
</tr>
</tbody>
</table>
Considerations for Farewell Hunt Area

- Estimated 60% to 70% reporting
- Hunters entirely access this area by aircraft
- Primarily use ATVs for transporting and hunting
- Board may wish to consider if institution of registration permit would affect subsistence opportunity
Using 21E as a Similar Model

- 2014: GASH AC put forth a similar proposal that was adopted in 21E
- Post 2014 reported harvest almost doubled in 21E after RM836 institution
- We suspect a similar effect may take place if proposal is adopted
Proposal 112
Moose

Change the moose harvest ticket requirement to a registration permit within the Farewell portion of Unit 19C

Department Recommendation: Support

Proposed By: McGrath AC
McGrath AC: Support

Proposal 113
Moose

Require nonresident hunters to complete hunter orientation prior to hunting moose in Units 21A and 21E

Department Recommendation: Neutral

Proposed By: McGrath AC & GASH AC
McGrath AC: Support
Proposal 113
Moose

Current Regulations

Unit 21A
- Nonresidents — One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side with a harvest ticket during September 5–25

Unit 21E
- Nonresidents — One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by drawing permit (DM837/DM839) during September 5–25

Proposal 113
Moose

Proposed Regulation Changes

- Would require 21A & 21E nonresident moose hunters to complete video orientation “Is This Bull Legal?” and “Field Care of Big Game” before hunting
- No change to seasons, antler restrictions, or bag limits
- Can be completed through department website
Exceptions

- Nonresident hunters accompanied by a guide or resident family member within 2nd degree kindred
Proposal 113
Moose

Require nonresident hunters to complete hunter orientation prior to hunting moose in Units 21A and 21E

Department Recommendation: Neutral

Proposed by: McGrath AC & GASH AC

McGrath AC: Support

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Proposal 114
Caribou

Establish an Antlerless Winter Registration Caribou hunt in Units 21A and 19D

Department Recommendation: Supports

Proposed By: McGrath AC

McGrath AC: Support (with amendments)
Proposal 114
Caribou

**Current Regulations**

**Unit 21A:**
- Both residents and nonresidents: One bull with a harvest ticket, August 10–September 20

**Unit 19D Within drainages of the Nixon Fork River:**
- Both residents and nonresidents: One bull with a harvest ticket, August 10–September 20

**Unit 19D Remainder:**
- Residents: One bull with harvest ticket, August 10–September 20 OR
- One caribou with harvest ticket, November 1–January 31
- Nonresidents: One bull with harvest ticket, August 10–September 20

---

Proposal 114
Caribou

**Proposed Regulations**

**Unit 19D & Unit 21A**
- Residents: One antlerless caribou Nov 1-Feb 28 by registration permit
- No airplane restrictions
- The old winter hunt during Nov 1-Jan 21 would no longer be in effect
Proposal 114
Caribou

Background

- The Beaver Mountain and Sunshine Mountain herds are estimated at around 800 caribou

- Positive C&T finding for these herds in 19A, 19D, 21A, and 21E

- Amount necessary for subsistence of 5 caribou
### Proposal 114 Caribou

#### Survey results

<table>
<thead>
<tr>
<th>Year</th>
<th>Beaver Mountains Adults/Calves (Total)</th>
<th>Sunshine Mountains Adults/Calves (Total)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>19/4 (23)</td>
<td>58/15 (73)</td>
<td>96</td>
</tr>
<tr>
<td>2009</td>
<td>62/15 (77)</td>
<td>69/12 (81)</td>
<td>158</td>
</tr>
<tr>
<td>2011</td>
<td>56/11 (67)</td>
<td>306/61 (367)</td>
<td>434</td>
</tr>
<tr>
<td>2012</td>
<td>228/34 (262)</td>
<td>510/79 (589)</td>
<td>851</td>
</tr>
<tr>
<td>2013</td>
<td>85/9 (94)</td>
<td>354/40 (394)</td>
<td>488</td>
</tr>
<tr>
<td>2019</td>
<td>237/32 (269)</td>
<td>196/40 (236)</td>
<td>505</td>
</tr>
</tbody>
</table>
Caribou Harvest

- Access is the most limiting factor
- Average annual harvest in the Beaver and Sunshine Mtn. herds was 3 caribou per year
- No winter harvest during last 5 years
Proposal 114 Caribou

Considerations

- Proposal would increase winter access in 19D
  - *Remove Nixon Fork access restriction*

- Proposal creates a long hunt season
  - *Nov-Feb*

- Long season and new access, harvest would need to be monitored closely
  - *Short reporting Period*

- The antlerless restriction should reduce the take of cows

- First antlerless caribou hunt in Alaska

Proposal 114 Caribou

Additional Considerations

- The AC clarified they would like permits available locally during the season

- Aircraft prohibition

- If the board decides to adopt this proposal the department will need guidance on these 2 issues
Proposal 114
Caribou

Establish an antlerless winter registration caribou hunt in Units 21A and 19D

Department Recommendation: Supports

Proposed by: McGrath AC
McGrath AC: Support

Proposal 115
Salvage

Require meat to be left on the bone for caribou, moose and bison in Units 19, 21A, and 21E

Department Recommendation: Neutral

Proposed By:
McGrath AC
SHAC
Central Kuskokwim AC
GASH AC

McGrath AC(support with amendment)
SHAC (support with amendment)
### Proposal 115
#### Salvage

**Current Regulations**

*Meat that must be left on the bone when salvaged prior to Oct. 1st*

<table>
<thead>
<tr>
<th>Unit</th>
<th>Caribou</th>
<th>Moose</th>
<th>Bison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 19A Holitna–Hoholitna CUA</td>
<td>FQ, HQ</td>
<td>FQ, HQ</td>
<td>None</td>
</tr>
<tr>
<td>Unit 19A remainder</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Unit 19B</td>
<td>FQ, HQ</td>
<td>FQ, HQ</td>
<td>None</td>
</tr>
<tr>
<td>Unit 19C</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Unit 19D</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Unit 21A</td>
<td>FQ, HQ</td>
<td>FQ, HQ, Ribs</td>
<td>None</td>
</tr>
<tr>
<td>Unit 21E</td>
<td>None</td>
<td>FQ, HQ, Ribs</td>
<td>None</td>
</tr>
</tbody>
</table>

### Proposed Regulations

- Require front quarters, hind quarters, and ribs to be left on the bone when salvaged

- Required for caribou, moose, and bison in Units 19, 21A, and 21E

- McGrath AC and SHAC AC amendment requires meat on bone salvage prior to October 1st
Proposal 115
Salvage

- This proposal would standardize regulations
- A lot of meat is donated to villages in 19A, 19D & 21E
- Easier for Troopers to enforce salvage requirements
- Potential impacts to hunters
  - More difficult to transport
  - Increased costs to hunters

Proposition 115
Salvage

Require meat to be left on the bone for caribou, moose and bison in Units 19, 21A, and 21E

Department Recommendation: Neutral

Proposed By:
- McGrath AC
- SHAC
- Central Kuskokwim AC
- GASH AC

McGrath AC (support with amendment)
SHAC (support with amendment)
Proposal 116
Muskox

Seek findings issued from the Board of Game regarding muskox herd management strategies in Unit 19A

Department Recommendation: Neutral

Proposed by: Central Kuskokwim AC

Current Regulations:

- There is no open season for muskox in Unit 19A
- There has been no C&T or ANS findings
Proposed Regulations:

- Seek BOG findings regarding muskox herd management strategies in Unit 19A
- No regulatory aspects to this proposal
Proposal 116
Muskox

History

• Portage Mountain herd originated from Nelson Island

• 1989- Collared cow muskox was observed at Arhymot Lake near Kalskag

• 2005- Muskox near Kalskag and Holy Cross

• 2009- 10 muskox observed near Kalskag

• 2017-2019- First aerial surveys

Proposal 116
Muskox

Current population status

• Beginning to gather baseline data
  • 4 surveys completed to date

• Estimated at 100 muskox

• Photography aids in count accuracy and composition data
Proposal 116
Muskox

Requested Findings

- This strategy applies to the Unit 19A portion of the Kuskokwim River drainage Portage Mountain muskox herd territory as outlined in the Map 1, including the buffer zone surrounding the Portage Mountains;
- The muskox season in this area will remain closed for 4 years beginning in the year 2020;
- The season will be opened with a limited number of permits only after 4 years of no hunting, or after there is a minimum muskox population in the Portage Mountains of 150 animals;
- There will be no cow hunts unless habitat degradation occurs from excessive browsing;
- It is understood that a large muskox population will serve (but not completely) the subsistence needs of the residents of this area. The Central Kuskokwim AC fully expects that as limited subsistence hunting begins on this herd, the number of musk ox harvested locally will be a priority;
- Enforcement has a role in this strategy that needs to be developed in a cooperative fashion;
- The CKAC desires to collaborate with the local communities in the drafting of the Portage Mountain muskox Management Plan
- The Department is committed to achieving the goal of at least 150 muskoxen in the Portage Mountain muskox count area.

Proposal 116
Muskox

Seek findings issued from the Board of Game regarding muskox herd management strategies in Unit 19A

Department Recommendation: Neutral

Proposed by: Central Kuskokwim AC

Central Kuskokwim AC: Support
Proposal 117  
Grouse

Determine a customary and traditional use finding for grouse in Unit 19 and modify regulations to provide reasonable opportunity for subsistence take.

5 AAC 99.025(a) Customary and traditional uses of game population(s)

- **Effect of the proposal**
  - Establish a positive customary and traditional (C&T) use finding for grouse in GMU 19 and modify seasons and bag limits where appropriate

- **Department position**
  - NEUTRAL. This is an allocative issue.

- **Public proposal**
  - SHAC **OPPOSED**
  - McGrath AC **TOOK NO ACTION**
  - Central Kuskokwim AC **SUPPORTED**

---

Proposal 118  
Ptarmigan

Determine a customary and traditional use finding for ptarmigan in Unit 19 and modify regulations to provide reasonable opportunity for subsistence take.

5 AAC 99.025(a) Customary and traditional uses of game population(s)

- **Effect of the proposal**
  - Establish a positive customary and traditional (C&T) use finding for ptarmigan in GMU 19 and modify seasons and bag limits where appropriate

- **Department position**
  - NEUTRAL. This is an allocative issue.

- **Public proposal**
  - SHAC **OPPOSED**
  - McGrath AC **TOOK NO ACTION**
  - Central Kuskokwim AC **SUPPORTED**
Proposal 119
Lynx

Extend the lynx trapping season in 19C, 19D, and 21A to March 31

Department Recommendation: Support

Proposed by: McGrath AC

McGrath AC: Support

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Proposal 119
Lynx

Current Trapping Regulations
Units 19C, 19D, and 21A: No bag limit November 1-March 15

Proposed Trapping Regulation Changes
Units 19C, 19D, and 21A: No bag limit November 1-
March 31
Proposal 119
Lynx

**Lynx Trapping Considerations**

- No conservation concerns
  - *Lynx harvest does not drive trapping efforts*
  - *Harvest is low*
  - *Low additional harvest expected*
Lynx Trapping Considerations

- Lynx Harvest
  - Declining in recent years
  - Participation is decreasing
  - Large areas are inaccessible to trap lynx

Proposal 119 Lynx

19C, 19D, & 21A Annual Lynx Harvest During 1999-2018

<table>
<thead>
<tr>
<th>Regulatory Year</th>
<th>Lynx Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>9</td>
</tr>
<tr>
<td>2000</td>
<td>47</td>
</tr>
<tr>
<td>2001</td>
<td>30</td>
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<td>2002</td>
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<td>2003</td>
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<td>2016</td>
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<tr>
<td>2017</td>
<td>15</td>
</tr>
<tr>
<td>2018</td>
<td>15</td>
</tr>
</tbody>
</table>
Lynx Trapping Considerations

- March Harvest and Incidental Catch
  - BOG extended season from Feb 28th to March 15th in 2014
  - Historically harvest low in March
Lynx Trapping Considerations

- Opportunity
  - *This extension creates more opportunity*
  - *Aligns season with wolverine*

- Fur Quality
  - *Late March lynx are said to have poorer quality fur*
  - *Others believe there is no decline in quality*
Proposal 119
Lynx

Extend the Lynx trapping season in 19C, 19D, and 21A to March 31

Department Recommendation: Support

Proposed by: McGrath AC

McGrath AC: Support