# FEDERAL WILDLIFE CLOSURE REVIEW
# WCR12-22

**Closure Location:** Unit 25D West

**Current Federal Regulation**

| | |
|---|---|
| *Unit 25D West — Moose* | |
| *That portion lying west of a line extending from the Unit 25D boundary on Preacher Creek, then downstream along Preacher Creek, Birch Creek, and lower mouth of Birch Creek to the Yukon River, then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River, then upstream along the west bank of the Hadweenzic River to the confluence of Forty and One-Half Mile Creek, then upstream along Forty and One-Half Mile Creek, to Nelson Mountain on the Unit 25D boundary—1 bull moose by Federal registration permit.* | *Aug. 25 – Feb. 28* |
| *Permits will be available in the following villages:* | |
| *Beaver (25 permits)Birch Creek (10 permits)* | |
| *Stevens Village (25 permits)* | |
| *Permits for residents of 25D west who do not live in one of the three villages, permits will be available by contacting the Yukon Flats National Wildlife Refuge Office in Fairbanks or a local Refuge Information Technician. Moose hunting on public land in Unit 25D West is closed at all times except for residents of Unit 25D West hunting under these regulations. The moose season will be closed by the Yukon Flats National Wildlife Refuge Manager when 60 moose have been harvested in the entirety (from Federal and non-Federal lands) of Unit 25D West.* | |

**Closure Dates: Aug. 25 – Feb. 28**

**Current State Regulations:**

| **Species and Bag limits – Moose** | **Permit/ Ticket Required** | **Open Season** |
|---|---|---|
| ***Unit 25:*** *lying west of a line extending from the Unit 25D boundary on Preacher Creek, then downstream along Preacher Creek, Birch Creek, and lower mouth of Birch Creek to the Yukon River, then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzik River, then upstream along the west bank of the Hadweenzik River to the confluence of Forty and One-Half Mile Creek, then upstream along Forty and One-Half Mile Creek, to Nelson Mountain on the Unit 25D boundary* | *TM940* | *Aug. 25–Feb. 28* |

***Residents:*** *One bull by Tier II permit*

***Nonresidents:*** *no open season*

**Regulatory Year Initiated: 1993-1994**

**Regulatory History:**

Unit 25D was divided by the State into Unit 25D West and Unit 25D East (remainder) in the early 1980s to allow the use of differing regulatory schemes to address the status of the respective moose populations. Permit systems that limit the hunt primarily to residents in Unit 25D West have been in place since the early 1980s due to low moose density and relatively high demand by local residents.

In 1983, a State registration hunt for one bull moose was established, with 60 permits available to residents of Beaver (25 permits) Stevens Village (25 permits), and Birch Creek (10 permits). In 1990, the State established a Tier II permit hunt in Unit 25D West, because the harvestable surplus was deemed insufficient to support all subsistence uses. During the 1990s, an average of 117 permits was issued annually. Beginning in 1990, the Federal Subsistence Board (Board) began promulgating regulations for subsistence use on Federal public lands and initially provided an unlimited number of Federal permits to residents of Beaver, Stevens Village and Birch Creek to harvest bull moose. In 1993, based on 1992 survey information indicating a low density moose population in Unit 25D West, prudent management warranted restricting harvest of moose prior to December when most bull moose shed their antlers. This was done to help ensure the harvest of bulls only. To address both agency and local concerns, the Board adopted Proposal # 60 (P93-60) on April 8, 1993 with modifications to: 1) establish a limited harvest by providing an antlered-bulls-only season; 2) extend the season until December 20; 3) establish a combined State/Federal quota of 30 antlered-bull moose; 4) continue Federal registration permit allocations to comply with the locally-preferred, community harvest management system; and 5) close moose hunting on Federal public lands within the affected area except for residents of Stevens Village, Beaver, and Birch Creek. Moose hunting on Federal public lands in Unit 25D West has been closed since the 1993-1994 regulatory year except for residents of Unit 25D West.

In August 1993, the Board also added a February season for bull moose (1 Feb–20 Feb) and deleted the antler requirement for this February hunt in Unit 25D West. This was the result of a request for reconsideration (R93-02) by Stevens Village and the Dinyee Corporation.

In 1994, the Stevens Village Council submitted a proposal to change the harvest limit from one antlered-bull to any bull and requested a longer season to meet the subsistence needs and traditions of the Village (P94-077). The Board adopted the proposal as modified by the Eastern Interior Regional Advisory Council establishing a harvest season from 25 August to February 28, There were no changes to the overall harvest quota of 30 bull moose for Unit 25D West.

In 2001, the Board expanded the moose hunt in Unit 25D West to include all the residents living in Unit 25D West, not just those living in the villages of Beaver, Stevens Village, or Birch Creek (WP01-43). Those residents living outside of Beaver, Birch Creek, or Stevens Village could obtain moose hunting permits by contacting the Yukon Flats National Wildlife Refuge Office in Fairbanks or a local Refuge Information Technician.

Between 1993 and 1999, State Tier II permits were not valid on Federal public lands. During this period, a maximum of 30 Federal permits and 125 State Tier II permits were issued annually. In 1999, discussions with local residents helped identify a number of steps that could improve moose management on the western Yukon Flats, including revising the harvest quota for moose, reducing the number of Tier II permits and aligning State and Federal hunting seasons (Caikoski, 2008, 2010). In 2000, the Alaska Board of Game lengthened the State season in Unit 25D West to Aug. 25–Feb. 28 to match the Federal season, increased the harvest quota from 35 to 60 bull moose, and reduced the number of Tier II permits from 125 to 75. When a maximum of 60 moose have been harvested on the Federal and State lands the moose season in Unit 25D West would close (P00-60). The number of annual permits, the combined harvest quota, and the closure of Federal public lands to non-Federally qualified users are still in effect.

**Closure Last Reviewed:** 2009—WCR08-22

**Justification for Original Closure (Section 815(3) criteria):**

Section 815(3) of ANILCA states:

> *Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on the public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in 816, to continue subsistence uses of such populations, or pursuant to other applicable law; or…*

Results from population surveys conducted in 1992 estimated that there were 605 moose in Unit 25D West, which was considerably lower than the population estimate of 1,479 in 1986. Although different population estimation methods were used, managers were concerned about the continued viability of this population based on the decline in the moose population from 1986 and 1992, the low moose density, low survival of yearling cows, high mortality rate on the younger aged moose and cows, and under-reporting of the harvest (FWS 1993). Based on the management goal to limit the harvest to no more than 5% of the population (n=605 in 1992), the Board adopted proposal 93-60 which reduced the maximum allowable take to 30 bulls. Combined with the estimated annual subsistence harvest for Stevens Village, Beaver, and Birch Creek, it was determined that there was not a surplus of moose for nonresidents or residents living outside of the Unit 25D West (FSB 1993). Thus the original closure was implemented for the conservation of a healthy moose population and to ensure subsistence use of this population without competition from outside hunters.

**Council Recommendation for Original Closure:**

The council members for the Eastern Interior Alaska Subsistence Regional Council had not been selected and finalized by the April 1993 Board meeting so there was no recommendation. In 2009, during the last review, the Board recommended to maintain the closure (WCR08-22).

**State Recommendation for Original Closure:**

The State supported the Staff Committee's modified recommendation as stated above.

**Biological Background:**

In the 1980s, separate surveys areas were established in subunits 25D East and 25D West by the Alaska Department of Fish and Game (ADF&G) and the U.S. Fish and Wildlife Service (USFWS), respectively.

Low moose density in Unit 25D West, combined with relatively high demand for moose by local residents resulted in the use of permit systems that limited hunting primarily for local residents in this area.

The ADF&G initiated a cooperative effort in 2001 to develop a moose management plan for the Yukon Flats. By 2002, the Yukon Flats Cooperative Moose Management Plan (YFCMMP) was completed and endorsed by the Alaska Board of Game (ADF&G 2002). The YFCMMP was designed to promote moose population growth in the Yukon Flats through the following guidelines: 1) improve moose harvest reporting to better document subsistence needs and improve management, 2) reduce predation on moose by increasing the harvest of bears and wolves, 3) minimize illegal cow harvest and reduce the harvest of cows for ceremonial purposes to improve recruitment, 4) inform hunters and others about the low moose population on the Yukon Flats and avenues people could take to help in the effort to increase moose abundance, and 5) use scientific information and traditional knowledge to help make management decisions.

Because moose numbers in the western Yukon Flats area continue to be low relative to the availability of suspected high quality habitat, management objectives included measures to promote substantial growth of the population. Current management objectives include: 1) increase the size of the moose population by 2% to 5% annually in specific hunting areas adjacent to local communities in Unit 25D; 2) work with local residents to improve harvest reporting compliance; 3) manage the population to maintain a minimum of 40 bulls/100 cows as observed during fall surveys; 4) manage to minimize cow moose harvest while the population is rebuilding; and 5) conduct annual surveys to monitor moose population status and trends (Caikoski 2010).

In 1992 it was estimated that there were 602 (± 22%) moose in Unit 25D West (Stephenson 2002) which was lower than the previous estimate of 1,479 in 1986 (FWS 1993). Since 1999, population surveys have been conducted in these two subunits utilizing geospatial population estimators (GSPE) which helps standardize the survey methodology and allow for more accurate comparisons (Ver Hoef 2001, 2008; Kellie and DeLong 2006). Survey data indicate that since 1999 moose numbers have been relatively stable in the eastern Yukon Flats and declined in the western Yukon Flats. Densities in the western Yukon Flats area declined from 1999 to 2004 and have remained low but stable since 2004 (**Figure 1**) (Caikoski 2010, Lake 2010). Although the point estimates have declined from a high in of 862 in 1999 to a low of 418 in 2006, there is no significant difference in the point estimates from 1999-2008 due to the high variance associated with the point estimates (Kellie 2009). From 1999 to 2010, the average estimated moose density has been 0.23 (range 0.18 to 0.38) moose/mi$^2$ (Caikoski 2008, 2010; Lake 2008, 2010). The ADF&G classified the moose population density in the western Yukon Flats (Unit 25D West) as at "extremely low densities" (Caikoski 2008, 2010) and it continues to be low relative to habitat potential (Boertje et al. 2007).

Compared to increasing moose populations in similar habitat on Togiak National Wildlife Refuge (30-60/100 from 1998-2006; Aderman 2008), the calf:cow ratio for Unit 25D West during the 2010 survey (32/100; Lake 2010) was at the lower limit. The most recent bull:cow ratio in 25D West was 35 bull:100 cows (Lake 2010) which is above the 20-30 bulls:100 cows range which is thought to be sufficient for synchronous breeding among all the females during first estrus (Schwartz 2007). All the previous bull:cow ratios, except October 1999, exceeded the management goal of a minimum of 40 bulls per 100 cows during fall surveys as stated in the YFCMMP (ADF&G 2002; Lake 2010). The high bull:cow ratio, and the low number yearling bulls (n=4), seen during the most recent survey suggest that annual recruitment is below what is expected for this population (Lake 2010).

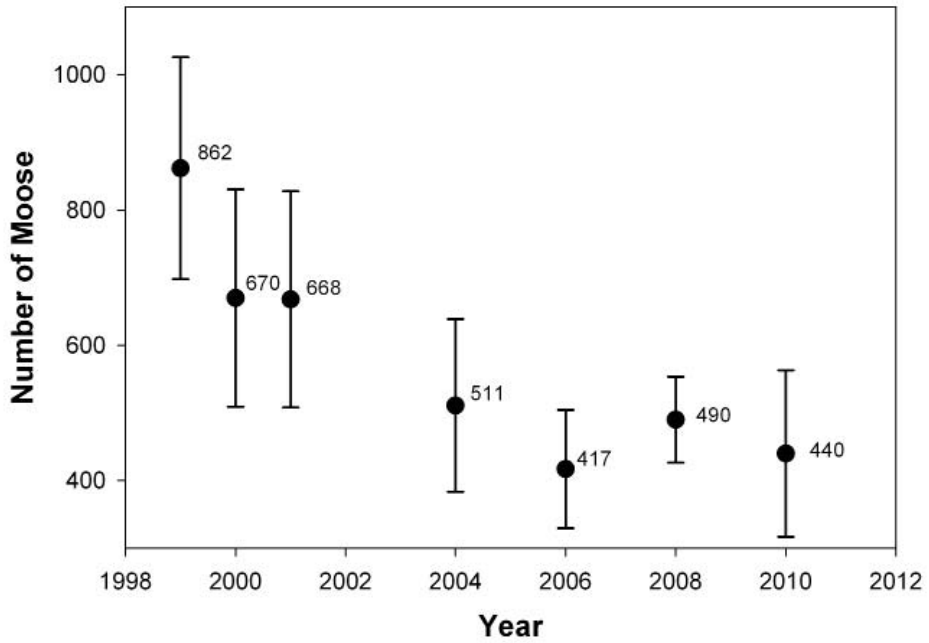


**Figure 1.** Estimated fall moose population (with 90% confidence interval) for the western Yukon Flats portion of Unit 25D West (Lake 2010).

The moose population in Unit 25D appears to be well below the carrying capacity for this area based on the quality and quantity of suitable habitat (Boertje et al. 2007). Moose in the unit appear to be in excellent nutritional condition, and the cows have a relatively high pregnancy and twinning rate (Bertram and Vivion 2002).

**Harvest History:**

Despite fluctuations in the reported harvest from Beaver, Stevens Village, and Birch Creek since the 1993/1994 regulatory year, the annual reported moose harvest has not exceeded the harvest quota of 60 bull moose. Studies indicate that wolf, black bear, and grizzly bear predation of moose calves and wolf predation of adult moose during winter are factors potentially limiting annual recruitment and population growth (Bertram and Vivion 2002, Lake et al. 2009). Any additional unreported harvest of cow moose by local residents would also contribute to limiting population growth (ADF&G 2002, Caikoski 2010). Harvest data via Federal registration permits and the State Tier II harvest is shown in **Table 1** and harvest reported via household surveys conducted by Athabascan Tribal Government are shown in **Table 2**.

**OSM Recommendation**

X maintain status quo
__ initiate proposal to modify or eliminate the closure
__ other recommendation

**Justification for the OSM Recommendation:**

The Federal closure for Unit 25D West moose remains important to the residents of Stevens Village, Beaver, and Birch Creek, as it provides a subsistence priority under Section 815-Title VIII of ANILCA.

**Table 1.** Number of moose harvested and recorded by registration permits for the State Tier II permit hunt (TM940) and Federal subsistence hunt for Unit25D West for regulatory years 2000/2001 to 2010/2011. The Federal subsistence hunt includes the villages of Beaver, Birch Creek, Stevens Village, and Fort Yukon (OSM 2012).

| Year | Federal Subsistence Harvest | State Tier II Harvest |
|---|---|---|
| 2000/2001 | 9 | 8 |
| 2001/2002 | 9 | 4 |
| 2002/2003 | 7 | 4 |
| 2003/2004 | 2 | 3 |
| 2004/2005 | 3 | 1 |
| 2005/2006 | 13 | 5 |
| 2006/2007 | 8 | 2 |
| 2007/2008 | 10 | 2 |
| 2008/2009 | 4 | 0 |
| 2009/2010 | 1 | 2 |
| 2010/2011 | 5 | 11 |

**Table 2**. Number of reported moose harvested in Unit 25 West (Beaver, Stevens Village, Birch Creek) between 2002/20033-2007/2008a (Council of Athabascan Tribal Governments 2007, Lake 2010).

| Year | Number of Moose Harvested |
|---|---|
| 2002/2003 | 42 |
| 2004/2005[b] | 45 |
| 2005/2006[c] | 32 |
| 2006/2007[d] | 17 |
| 2007/2008[d] | 9 |

[a] data from Council of Athabascan Tribal Governments 2003, 2005, 2006, 2007
[b] 42% of Yukon Flats households surveyed
[c] 50% of Yukon Flats households surveyed
[d] all Yukon Flats households surveyed

The moose population in Unit 25D West can only sustain a limited harvest as the moose population remains stable at relatively low population levels, occurs at very low population densities, and the most recent bull:cow ratio is below the YFCMMP stated objective of 40. Increased competition with other State residents if the closure was removed would reduce opportunity for Federally qualified users to hunt moose in this area and thus is not recommended. The State and Federal permit systems, the number of State and Federal permits, and the combined State/Federal harvest quota of 60 bull moose, are the end results of 20 years of a co-management effort between the State and Federal Boards, ADF&G, USFWS, Eastern Interior Regional Advisory Committee, Yukon Flats Fish and Game Advisory Committee, Eastern Interior Alaska Subsistence Regional Advisory Council, Council of Athabascan Tribal Governments, and local residents. Retaining the closure allows for the continued cooperative management necessary to reduce antlerless moose harvest and to improve harvest reporting. These cooperative efforts are crucial to meeting the existing management objectives and local subsistence opportunity. The next review of the Federal closure for Unit 25D West will be in 2015. The status quo is necessary to continue subsistence uses under ANILCA Section 815(3).

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