WP26-32 Executive Summary	
General Description	Wildlife Proposal WP26-32 requests to recognize the customary and traditional use of brown bear in Unit 8 by residents of Kodiak. *Submitted by: Kodiak/Aleutians Regional Advisory Council*
Proposed Regulation	**Customary and Traditional Use Determination—Brown Bear** **Unit 8** *Residents of Akhiok, Larsen Bay, Karluk,* ***Kodiak,*** *Old Harbor, Ouzinkie, and Port Lions.* ***The community of Kodiak includes residents on the Kodiak Road system (Monashka, City of Kodiak, Bells Flats to Chiniak and Pasagshak and Anton Larsen Bay). Not included: Residents of Nemetz, the U.S. Coast Guard Base, and the Pacific Spaceport Complex-Alaska.***
OSM Preliminary Conclusion	**Support** Proposal WP26-32 **with modification** to revise the customary and traditional use determination area to include all residents of the Kodiak Island road systems except residents of the U.S. Coast Guard Base.
Kodiak/Aleutians Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT CUSTOMARY AND TRADITIONAL USE ANALYSIS
WP26-32

ISSUE

Wildlife Proposal WP26-32, submitted by the Kodiak/Aleutians Subsistence Regional Advisory Council (Kodiak/Aleutians Council), requests that the Federal Subsistence Board (Board) recognize the customary and traditional use of brown bears in Unit 8 by residents of Kodiak, which the proponents define as including the entirety of the road system. Specifically, the proponent describes the community of Kodiak as including Monashka, Kodiak City, Bells Flats to Chiniak, and Pasagshak and Anton Larsen Bay, but excluding Nemetz, the U.S. Coast Guard Base, and residents of the Pacific Spaceport Complex – Alaska (previously known as the Kodiak Rocket Launch Facility).

Proponent Statement

The proponents state that the customary and traditional use determination for brown bears in Unit 8 should include residents of the Kodiak Road System, as defined above. The proponents note that all residents of Kodiak Island have a long history of harvesting brown bears for food and using brown bear parts in traditional handicrafts. In the published journal, *Two Voyages to Russian America*, 1802-1807, Gavriil I. Davydov writes, 'on Kad'iak sometimes two or three people in a group creep up on an animal and fire arrows at it, and if it attacks them, they fight it off with spears.' Davydov also notes that *kamleikas* (rain parkas) are made from the intestines of whales, seals and bears, and of the gut kamleikas, the best are from the bears (Davydov. Published 1977 from journals). The proponents also state that the Alutiiq Museum and local author and Kodiak brown bear expert Larry Van Dael have produced publications about the importance of traditional bear harvesting on Kodiak Island. In addition, many museums across the world hold collections of art that depict bears, often in the form of traditional clothing that today we would recognize as native handicrafts from Kodiak.

The proponent notes that the importance of accessing brown bears for food and other needs on Kodiak Island is well documented. They argue that residents of the more remote villages around the island have a customary and traditional use finding for brown bear and that residents of the Kodiak Road System, who have the same history of use, should not be excluded from this customary and traditional use determination and associated harvesting opportunity under Federal subsistence regulations.

Current Federal Regulations

Customary and Traditional Use Determination—Brown Bear

Unit 8	*Residents of Akhiok, Larsen Bay, Karluk, Old Harbor, Ouzinkie, and Port Lions*

Proposed Federal Regulations

Customary and Traditional Use Determination—Brown Bear

Unit 8	*Residents of Akhiok, Larsen Bay, Karluk,* ***Kodiak,*** *Old Harbor, Ouzinkie, and Port Lions.*
	The community of Kodiak includes residents on the Kodiak Road system (Monashka, City of Kodiak, Bells Flats to Chiniak and Pasagshak and Anton Larsen Bay). Not included: Residents of Nemetz, the U.S. Coast Guard Base, and the Pacific Spaceport Complex-Alaska.

Relevant Federal Regulations

Unit 8—Brown bear

Unit 8—1 bear by Federal registration permit (FB0802) only, issued by the Kodiak National Wildlife Refuge Manager and per community as follows:	*Dec. 1—Dec. 15* *Apr. 1—May 15*
Akhiok—up to 2 permits;	
Karluk—up to 1 permit;	
Larsen Bay—Up to 3 permits;	
Old Harbor—Up to 3 permits;	
Ouzinkie—Up to 2 permits; and,	
Port Lions—Up to 2 permits.	

Relevant State Regulations

Unit 8−Brown bear			Season
Unit 8, Northeastern portion of Kodiak Island, including all drainages into Chiniak, Anton Larsen and northeast Ugak (east of the Saltery Creek drainage) bays, including Spruce,	*Residents and Nonresidents—1 bear every four regulatory years by permit available in person in Kodiak beginning Oct. 2* *OR*	*RB230*	*Oct. 25-Nov. 30*

Near, Long, Woody, and Ugak Islands	*1 bear every four regulatory years by permit available in person in Kodiak beginning Mar. 5*	*RB260*	*Apr. 1-May 15*
Unit 8 remainder	*Residents and Nonresidents—1 bear every four regulatory years by permit*	*DB101-128* *DB161-163* *DB201-228* *DB261-263*	*Oct. 25-Nov.30*
	OR		
	1 bear every four regulatory years by permit	*DB131-158* *DB191-193* *DB231-258* *DB291-293*	*Apr. 1-May 15*

Extent of Federal Public Lands

Unit 8 is comprised of approximately 52% Federal public lands that consist of 52% U.S. Fish and Wildlife Service (USFWS) managed lands and 0.02% Bureau of Land Management (BLM) managed lands.

Regulatory History

In 1986, the Alaska Board of Game (BOG) made a positive customary and traditional use finding for brown bear in Unit 8. However, this finding was reversed in 1987 after no residents requested a permit for the 1986/1987 special subsistence registration hunt (OSM 1996).

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of wildlife for subsistence uses on Federal public lands (57 Fed. Reg. 22940 [May 29,1992]). Under these regulations, there was no Federal subsistence hunt for brown bears in Unit 8 and no communities were recognized as having customary and traditional use of brown bears in Unit 8 at the time. However, the Board did adopt a customary and traditional use determination for deer in Unit 8 for all Unit 8 residents from State regulations (57 Fed. Reg. 22940 [May 29,1992]). This determination was

first made by BOG in 1987 and is notable because deer are an introduced species on Kodiak Island (OSM 1997).

In 1996, Proposal 96-26 requested the Board recognize the customary and traditional use of brown bears in Unit 8 by all Unit 8 residents. When considering this proposal, the Kodiak/Aleutians Council discussed concerns that allowing residents of Kodiak City to harvest brown bears under Federal subsistence regulations could negatively impact the guiding industry by substantially reducing the number of permits available for other Alaska residents and nonresident hunters (KARAC 1996). However, it appears at the time of the Council's original discussions it was not clear that the Board could allocate a specific and limited number of permits to individual communities (KARAC 1996). Based on the information available, the Kodiak/Aleutians Council recommended that the Board recognize the customary and traditional use of brown bears by residents of Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions, all of which are located off the road system. The Council requested that the communities of Ouzinkie and Port Lions be added to the customary and traditional use determination based on histories of migration and intermarriage between these communities and Old Harbor and Larsen Bay (FSB 1996, OSM 1996: 8). The Board adopted the Council's recommendation (FSB 1996), establishing a customary and traditional use determination for brown bear in Unit 8 (62 Fed. Reg. 29040 [May 29, 1997]).

In 1997, the Board adopted deferred Proposal P96-27, establishing a Federal subsistence brown bear hunt in Unit 8 from Dec. 1-15 and Apr. 1 - May 15, with a harvest limit of one bear by Federal registration permit. Up to 11 permits were to be distributed as follows: "up to 1 permit may be issued to Akhiok, up to 1 permit may be issued to Karluk; up to 3 permits may be issued to Larsen Bay; up to 2 permits may be issued in Old Harbor; up to 2 permits may be issued in Ouzinkie; and up to 2 permits may be issued in Port Lions" (62 Fed. Reg. 29040 [May 29, 1997]). The Kodiak/Aleutians Council originally recommended deferring this proposal to allow time to consult with affected communities regarding permit allocation and to clarify information regarding community harvest systems versus individual harvest limits (KARAC 1996: 94).

That same year, the Board also recognized the customary and traditional use of elk in Unit 8 by all Unit 8 residents (62 Fed. Reg. 29040 [May 29, 1997]). The State of Alaska had previously (in 1986 and again in 1993) made a negative customary and traditional use determination for elk in Unit 8, which were introduced to Kodiak Island in 1929. Support for this determination under Federal regulations stemmed in part from testimony provided during Kodiak/Aleutians Council meetings (OSM 1997). While the initial staff recommendation was to recognize customary and traditional use of elk by only some communities on Kodiak Island, the Council recommended that all Kodiak Island communities be included in the determinations based on kinship connections, marriage connections, and cultural unity across communities (KARAC 1997). The Council recommended including the communities along the road system in this determination based on testimony provided at the Council meeting (KARAC 1997).

In 2012, the Board considered Proposal WP12-22a, which requested that the Board recognize the community of Ninilchik's customary and traditional uses of brown bear in Units 8 and 15. The Board

supported a customary and traditional use determination for brown bear by residents of Ninilchik in Unit 15, but they deferred a decision regarding Unit 8 in deference to the recommendation of the Kodiak/Aleutians Council (FSB 2012). The proponent later withdrew this component of the proposal (KARAC 2012: 102).

In 2014, the Board adopted Proposal WP14-20 via the consensus agenda, increasing the number of Federal subsistence brown bear permits available in Unit 8 for the communities of Akhiok and Old Harbor. This proposal was adopted to provide additional opportunities for residents of these communities to harvest brown bear, for which there was no conservation concern. This regulatory change meant that a total of up to 13 permits could be issued, with up to two permits going to Akhiok and up to three permits going to Old Harbor. The permits were to be issued by the Kodiak Refuge Manager (OSM 2014).

In 2023, the Board deferred to the recommendation of the Kodiak/Aleutians Council to oppose FP23-05a, which requested that the Board recognize the customary and traditional use of salmon by residents of the Kodiak Coast Guard Base (FSB 2023). This action was based on lack of available data documenting that residents of the Kodiak Coast Guard Base harvest, use, and share salmon for subsistence-oriented purposes in the same way as other residents of Kodiak Island. It was also based on the fact that residents of the Base are typically not stationed in the area long enough to learn and pass down the same degree of local, subsistence-oriented knowledge and cultural values as other residents of the region (OSM 2023). The staff analysis preliminarily recommended supporting this proposal based on harvest data indicating that residents of Kodiak Station participate in salmon fishing and other subsistence practices on Kodiak Island (OSM 2023). This conclusion was revised to oppose the proposal following additional information provided by the Council at their meeting (OSM 2023).

In 2024, the Board adopted WP24-10 via the consensus agenda, eliminating the requirement to obtain a State locking tag for federally qualified subsistence users hunting under a Federal registration permit for brown bears in Unit 8 (FSB 2024a).

Also in 2024, the Board considered WP24-01, which requested allowing the sale of brown bear hides for brown bears harvested under Federal subsistence regulations statewide. When deliberating this proposal, the Kodiak/Aleutians Council again discussed whether it was culturally appropriate for hunters in their region to sell brown bear hides, and they expressed concern over regulatory changes that could increase brown bear harvest in their region (KARAC 2023). However, the Council ultimately voted to support the proposal, noting that it would likely lead to minimal additional harvest but would provide some subsistence users another means to help offset the high cost of living in rural Alaska (OSM 2024).

The Board deferred WP24-01 to provide additional time to further investigate how brown bear hides could be legally sold in areas with a one bear harvest limit, given the current restrictions under State regulations and CITES (FSB 2024). In February 2025, the Board again deferred WP24-01 to allow all ten Councils to reconsider the proposal and provide new recommendations given the new information and OSM conclusion included in the revised analysis. In March 2025, the Kodiak/Aleutians Council

considered this amended version of the WP24-01 analysis, which included the revised OSM conclusion to establish a Federal customary trade permit that would allow the domestic sale of brown bear hides harvested under Federal subsistence regulations, regardless of harvest limit and in compliance with CITES, which only applies to international sales. The modification also eliminated regulations requiring the skin of the skull and claws of brown bear hides to be retained at the time of sealing in certain areas. The Council's motion to support the proposal failed on a 5-5 vote. Council members opposed to the proposal stated it was not culturally appropriate in their region to sell the hides of brown bears, while Council members in support of the proposal stated that the proposed changes would allow subsistence users to more fully utilize the resource while helping to offset the high cost of living in Alaska (KARAC 2025). All other councils supported WP24-01 as modified by OSM in February 2025.

In July 2025, the Board adopted deferred proposal WP24-01 as modified by OSM. However, this regulation cannot be implemented until the Office of Management and Budget (OMB) approves the creation and use of the new OSM Customary Trade Permit.

Current Events

Two other proposals related to brown bears in Unit 8 were submitted in 2025. These proposals will also be considered by the Kodiak/Aleutians Council in fall 2025 and by the Board at its April 2026 regulatory meeting.

Proposal WP26-33 was submitted by the Kodiak/Aleutians Council and requests that the Board allocate up to four Federal subsistence brown bear permits to the community of Kodiak. Consideration of WP26-33 is contingent on the Board adopting a customary and traditional use determination for brown bear by residents of Kodiak. If WP26-33 is adopted, the number of Federal brown bear subsistence permits available in Unit 8 would increase from 13 to 17.

Proposal WP26-34 was submitted by a resident of Kodiak and requests that the limited sale of handicrafts made from nonedible byproducts of brown bears legally harvested in Unit 8 be allowed under Federal subsistence regulations.

Community Characteristics

The Kodiak Island Road system includes approximately 100 miles of developed roadway on northeast Kodiak Island. Most residences in this portion of the island are found within the administrative areas of Kodiak City, Kodiak Station census designated place (CDP), Womens Bay CDP, Mill Bay CDP, and Chiniak CDP. However, there are some residences outside of these administrative areas along the road system, which extends north of Kodiak Station CDP to Anton Larsen Bay, north of the Mill Bay CDP/Kodiak City areas along Monashka Bay, and south of the Womens Bay CDP to Pasagshak Bay. The road system also runs between the Kodiak Station and Kodiak City administrative areas, and between the Womens Bay CDP and Chiniak CDP areas, including the Bells Flats area (**Map 2**). The proponents of this proposal; therefore, request that the Board recognize the customary and traditional use of brown bear in Unit 8 by most residents along the entire extent of the Kodiak Island road system.

This area generally encompasses what is referred to as the Kodiak Road Zone in State sportfishing regulations (Clark et al. 2006, Keating et al. 2024).

However, the proponents note that Nemetz, the U.S. Coast Guard Base, and the Pacific Spaceport Complex (previously called the Kodiak Rocket Launch Facility) should not be considered part of the community of Kodiak (**Map 1**). The proponent states these areas should be excluded from a customary and traditional use determination due to differences in average length of residence, harvest and use of resources, and local subsistence-oriented knowledge. The U.S. Coast Guard Base is a discrete community within the Kodiak Station CDP, which is roughly equivalent to the U.S. Coast Guard property boundary (OSM 2023). Available information indicates that Nemetz is a neighborhood development within the Kodiak Station CDP that is currently being built and scheduled to be complete in 2025 (USCG Base Kodiak Housing Office n.d.). However, there is limited information available about this specific neighborhood. The Pacific Spaceport Complex is located approximately 44 road miles south of Kodiak City at Narrow Cape; it is on 3,717 acres of state-owned land under an Interagency Land Use Management Agreement with the Department of Natural Resources (PSCA 2020). The current land use agreement does not permit the construction of permanent/long-term lodging facilities, but Alaska Aerospace has identified a need for lodging for up to 300 people and may pursue revising the land use agreement to build lodging facilities on site (PSCA 2020). However, these lodging facilities would primarily be for short term residents (a few weeks up to four months) residing on or near the facility only during certain rocket launches (PSCA 2020).

There is very limited data available regarding number of residents or harvest patterns outside of city or CDP boundaries. Therefore, this analysis is limited to information available for Kodiak City, Kodiak Station CDP, Mill Bay CDP, Womens Bay CDP, and Chiniak CDP. Collectively, these communities represent 93.4% (11,735 people) of Kodiak Island Borough's total population (**Table 1**).

Kodiak City is located approximately 250 airmiles southeast of Anchorage, on the northeastern portion of Kodiak Island. It is separated from mainland Alaska by a 30-mile segment of the Shelikof Strait (Keating et al. 2024). The communities along the road system serve as the local hub for the remote communities located off Kodiak Island's road system, and it is the regional hub for Southwest Alaska more broadly (Keating et al. 2024). There are three Native tribes in the Kodiak area, including the Sun'aq Tribe of Kodiak, the Tangirnaq Native Village, and the Afognak Tribe. In recent years, more residents from Kodiak's smaller villages have relocated to the Kodiak Road Zone because of declining commercial fishing opportunities, age, and increased cost of living (Keating et al. 2024).

Kodiak Island has been occupied for at least 7,500 years and is the ancestral territory of the Alutiiq/Koniag peoples (Clark 1998, Gillispie 2018, Steffian 2024). Koniags are a distinct ethnic group and speak a language related to the Central Yup'ik language of Bristol Bay and the Yukon-Kuskokwim Delta (KANA and ADF&G 1983). When the Russians arrived in the region in the 1784, there were an estimated 65 villages and several thousand Native residents on the archipelago (Clark 1968, Schroeder et al. 1987). Russian fur traders established a fortified base Three Saints Harbor on the site of present-day Kodiak City (Eide 1965, Black 2004, Solovjova 2003). Alaska Natives throughout the region were forced to harvest sea otters, bears, salmon, and whales for Russian merchants, altering local cultural

practices and resulting in major declines in sea otter and whale abundance by the early 1800s (Keating et al. 2024). Conflicts with Russians, disease epidemics, and several earthquakes in the late 1700s decimated Native populations and destroyed many villages (KANA and ADF&G 1983, Schroeder et al. 1987, Fitzhugh 1996).

Commercial whaling began in the region in 1835 and remained active until 1869 (KANA and ADF&G 1983). Commercial salmon fishing and canneries became a prominent industry in Kodiak beginning in the late 1800s, after whale and sea otter populations had declined (KANA and ADF&G 1983, Harper and McCarthy 2013). Commercial bear hunting was also an important economic industry from the late 1800s through 1925 (Svoboda and Crye 2023). Cattle ranching was another important economic activity in the Kodiak area, with large tracts of land used for ranches in the Womens Bay area by the early 1900s (Eide 1964).

The 20th century was marked by rapid social and environmental change on Kodiak Island. The eruption of Mount Katmai in 1912 destroyed settlements and salmon streams throughout Kodiak and had particularly negative impacts on northeastern Kodiak (Hildreth and Fierstein 2012). The Kodiak Naval Operating Base was constructed in the late 1930s (Keating et al. 2024), and significant development took place on the island during World War II (ADF&G 2002). The local population of the Kodiak Road Zone was 864 people in 1939; by 1941 over 10,000 military personnel and civilians had moved to the area (Mishler et al. 1995). Military troops were pulled out of Kodiak after the war and the population dropped, but then quickly rebounded as commercial fishing developed (Mishler et al. 1995). The commercial king crab fishery emerged in 1949 and rapidly became a key aspect of the economy (KANA and ADF&G 1982). This industry peaked in the mid-1960s, a period which was also marked by the 1964 Good Friday earthquake that destroyed downtown Kodiak City and the community of Afognak. Afognak residents were subsequently relocated to Port Lions (DCRA 2024a, Keating et al. 2024). The communities on Kodiak Island rebuilt around the king crab and other commercial fisheries, and from 1968 to 1980, Kodiak was the largest fishing port in the United States in terms of monetary value produced (KANA and ADF&G 1983, Mason 1995). However, by the early 1980s, king crab stocks were largely depleted (Mason 1995, Keating et al. 2024).

Kodiak Island's commercial and subsistence economy was further shaken by the 1989 Exxon Valdez oil spill, which caused the commercial fishing industry to collapse and significantly reduced subsistence harvests throughout the Kodiak Island Borough (Mishler and Cohen 1996, Fall 1999, Keating et al. 2024). The availability of oil cleanup jobs further decreased participation in commercial fishing and subsistence activities, exacerbating a trend that began when limited entry permits were first introduced in 1975 (Carothers 2015, Beaudreau et al. 2019, Keating et al. 2024). With coordination by the Kodiak Brown Bear Trust, funds from settlements related to the oil spill were used to purchase much of the land that was initially conveyed to Native corporations through the Alaska Native Claims Settlement Act (ANCSA), often with the explicit goal of protecting bear habitat from development (ADF&G 2002, Harper and McCarthy 2013).

Kodiak is still one of the largest fishing ports in the state and country, ranking fourth among U.S. ports for volume of landings (in pounds) in 2023 (NOAA 2025). The main income-earning industries today

are commercial fishing, service industries (such as healthcare, restaurants, tourism, and transportation), and government (Keating et al. 2024). The economy on Kodiak Island is highly seasonal. The summer months tend to bring large numbers of seasonal residents/employees to the area, while some of the local population disperses to coastal areas used for fishing and hunting (ADF&G 2002). Yet, overall, the population of permanent residents residing in the Kodiak Road Zone has declined by around 9% since 2000, while the population of remote villages on Kodiak Island has declined by around 34% during the same period (**Table 1**).

Subsistence practices continue to form a key basis of cultural identity, family life, and community well-being in both remote and road-accessible communities on Kodiak Island (Wolf and Walker 1987, Fall and Walker 1993, Fall 1999, Keating et al. 2024). Based on subsistence harvest data for 2021, residents of the Kodiak Road Zone harvested an average of 224 pounds of wild resources per household, with salmon, nonsalmon fish, and large land mammals (primarily deer and caribou, the latter of which is hunted on the south end of Kodiak Island and elsewhere in Alaska) representing the largest contributors to harvest by weight (Keating et al. 2024). There are often close familial and other social ties across Kodiak Island communities, and residents of the Kodiak Road Zone often share subsistence resources with residents of smaller communities located off the road system—a practice that makes northeastern Kodiak important to the subsistence practices of residents throughout the archipelago (Sill et al. 2021, Keating et al. 2024: 195).

Kodiak City

Kodiak City originates from the earliest Russian settlements on the island, who settled on the present-day location of Kodiak in 1784. It became the fortified base of Northeastern Company operations, which in 1799 became part the Russian American Company (KANA and ADF&G 1983, Solovjova 2003). The city was incorporated in 1940 and became the center of commercial fishing activities, with 14 canneries in the city in the early 1980s (KANA and ADF&G 1983, Keating et al. 2024). Today, Kodiak City remains the most populous community on Kodiak Island (**Table 1**) and most community-services and facilities are located here (Keating et al. 2024).

Kodiak Station

Kodiak Station CDP encompasses approximately 22,000 acres of northeastern Kodiak Island and includes the Kodiak U.S. Coast Guard (USCG) Base and surrounding residential areas (**Map 1**). Most off-base residences located in Kodiak Station CDP are owned by the USCG, but there are also properties and residences owned by the Kodiak National Wildlife Refuge (NWR) (Marchioni et al. 2016). USCG personnel and family can live on the USCG Base, in nearby off-base communities (**Table 3**), or elsewhere in the Kodiak Road Zone (OSM 2023). Off-base options owned by the USCG are located near the Buskin River and Buskin Lake, which support the most heavily utilized subsistence and sport fisheries on Kodiak Island (Keating et al. 2024). The military installation was originally developed in 1939 by the U.S. Navy (Mishler et al. 1995) but was turned over to the USCG in 1972 (OSM 2023). It is now the nation's largest USCG base, housing around 960 active-duty military personnel and their families (Keating et al. 2024). The Base has several of its own facilities

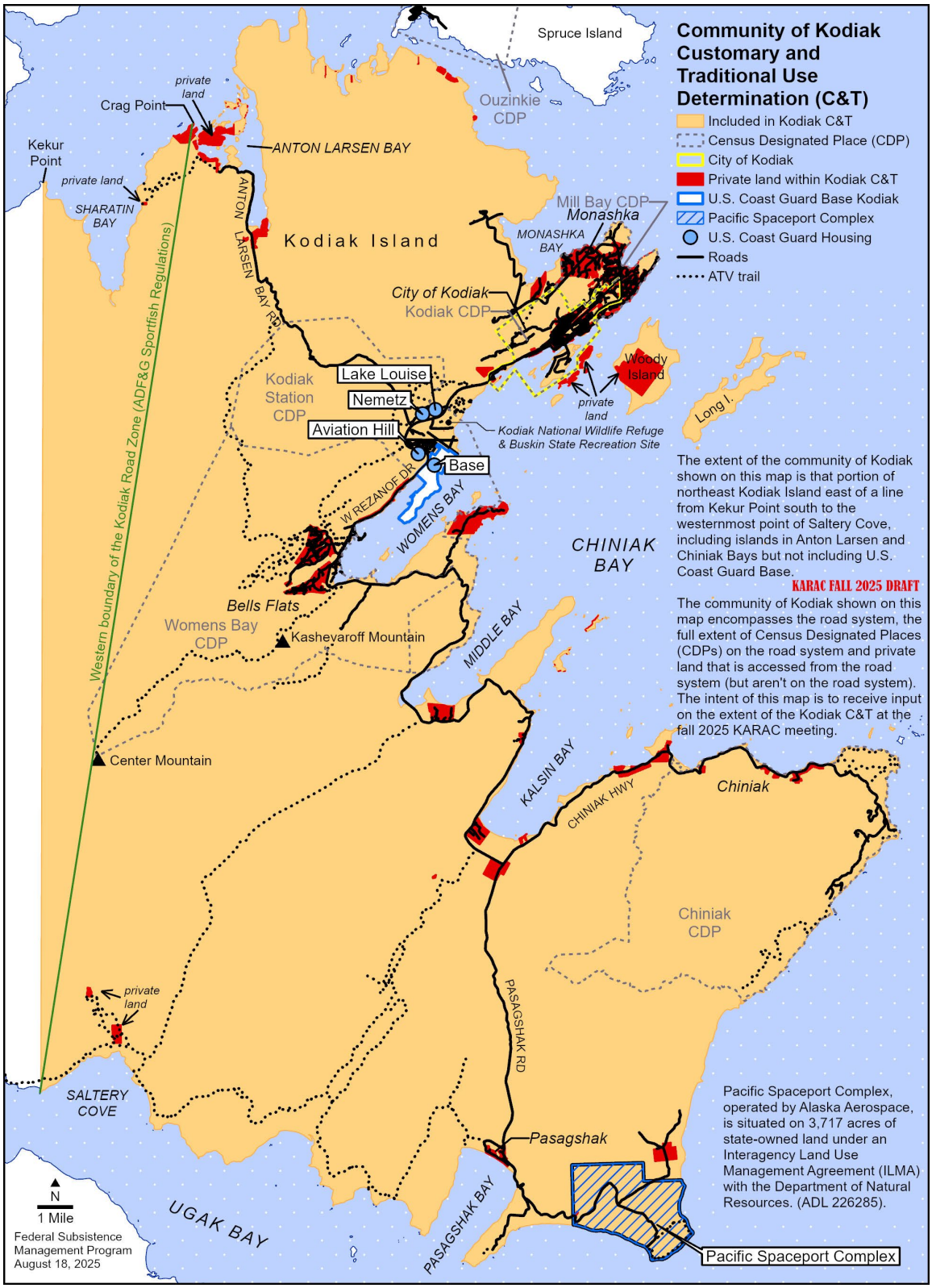
including water and sewer systems and a shopping center, and it is generally considered a distinct community (Keating et al. 2024).

Recent research indicates that the demographic makeup of Kodiak Station differs from other Kodiak Road Zone communities (Keating et al. 2024). Based on data from 2021, residents of Kodiak Station on average are much younger than residents of other Kodiak Road Zone communities, have resided in Kodiak for a much shorter duration, have a higher proportion of adults employed year-round, and harvest less subsistence foods by weight (**Table 2**). Similar trends were documented in the early 1990s (Mishler et al. 1995).

USCG personnel are typically only stationed for three-year tours, but the Kodiak USCG Base is above-average in requests for extensions due to the appeal of hunting, fishing, and outdoor recreation opportunities (Keating et al. 2024). Still, the relatively short residency of Kodiak Station residents impacts their resource use practices. Although Kodiak Station residents regularly harvest fish and wildlife (Marchioni et al., 2016), Mishler and colleagues (1995: X-20) noted that "newcomers do not participate as much in traditional subsistence activities as long-term residents. It generally requires two or three years to get acquainted with harvest methods and gear types and to become familiar with the seasonal locations of available wild resources." Previous research shows residents of Kodiak Station harvested less salmon compared to off-road communities (but comparable amounts to Kodiak City and Chiniak) and relied more on rod and reel over other harvest methods (Fall et al. 2001).

Mill Bay CDP, Womens Bay CDP, and Chiniak CDP

The other administrative areas located along the Kodiak Road Zone include the CDPs of Mill Bay, Womens Bay, and Chiniak. Recent research grouped these CDPs together as geographically distinct from Kodiak City or the Kodiak Station CDP (Keating et al. 2024). Mill Bay is the most populous CDP on the island. It is in the northeastern corner of the road system, which features some of the road system's highest density of residential housing. This area provides access to subsistence and sport fisheries around Monashka Bay (Keating et al. 2024). Womens Bay is located at the base of Old Womens Mountain and encompasses much of the lower Russian River and Sargent Creek valleys, which are important salmon fishing sites. Several large cattle ranches historically operated in the Womens Bay area (ADF&G 2002, Keating et al. 2024). Many of the roads in Womens Bay were constructed by the U.S. Army during World War II (DCRA 2024b, Keating et al. 2024). The land here was transferred to the State of Alaska in the late 1960s and subsequently developed into a residential area (DCRA 2024b, Keating et al. 2024). Due to its proximity to USCG Base, many residents of Womens Bay are military families (DCRA 2024b, Keating et al. 2024). Chiniak, a transliteration of the Alutiiq word for "cape" (*cingiyaq*), is located 45 miles southeast of Kodiak City, on the easternmost point of the island. Chiniak first developed when U.S. Army Corps of Engineers built an access road and an Air Force radar tracking station in the area just after World War II (DCRA 2024c, Keating et al. 2024). However, community services did not begin in earnest until the 1970s, when the local population grew (Keating et al. 2024).



Map 1. Administrative areas and road system in northeast Kodiak Island, and staff interpretation of proponent's proposed definition of the community of Kodiak for the purposes of Federal subsistence brown bear customary and traditional use determination.

Table 1. Population estimates for Kodiak Island Borough communities (ADLWD 2024). All remote communities have a customary and traditional use determination for brown bears in Unit 8 except for Aleneva CDP, which was established as a CDP after the Board recognized customary and traditional uses of brown bear in Unit 8 (OSM 1996).

Community	**1990**	**2000**	**2010**	**2020**	**2024**
Kodiak City	6,365	6,334	6,130	5,581	5,288
Mill Bay CDP	--	--	4,324	4,216	4,177
Kodiak Station CDP	2,025	1,840	1,301	1,673	1,441
Womens Bay CDP	620	690	719	743	778
Chiniak CDP	69	50	47	61	51
Balance*	3,220	3,991	266	203	216
Total Road Accessible	*12,299*	*12,905*	*12,787*	*12,477*	*11,951*
Akhiok	77	80	71	63	61
Aleneva CDP	--	68	37	5	8
Karluk CDP	71	27	37	27	36
Larsen Bay	147	115	87	34	34
Old Harbor	284	237	218	216	206
Ouzinkie	209	225	161	109	108
Port Lions	222	256	194	170	166
Total Remote	*1,010*	*1,008*	*805*	*624*	*619*
Total Kodiak Island	**13,309**	**13,913**	**13,592**	**13,101**	**12,570**

*The balance represents estimated number of people living in the Kodiak Island Borough outside of city or CDP boundaries. It is included here with the road-accessible communities under the assumption that most residents living beyond census area boundaries live along the road system in the northeastern portion of the island. However, there may be a small number of residents included in the balance estimate that reside in remote areas.

Table 2. Comparative demographics of Kodiak City, Kodiak Station CDP, and the Mill Bay, Womens Bay, and Chiniak CDPs for 2021. (HH) indicates data provided for head of household (Keating et al. 2024).

Community	Mean years of residency (HH)	Mean age of sampled households (yrs)	Maximum age of sampled households (yrs)	Employed adults working year-round (%)	Per capita income[a]	Average household harvest, pounds useable weight
Kodiak City	45.8	38	90	69.3	$31,106	224.0
Kodiak Station	5.3	21.1	47	78.5	$16,770	166.4
Mill Bay, Womens Bay, & Chiniak	46.6	37.7	89	68.8	$35,118	239.7

[a] Includes income from sources other than employment.

Table 3. Kodiak Coast Guard Housing Units (Dobroth 2022, USCG Base Kodiak Housing Office. N.d.).

Housing Community	Number of Housing Units	Location
Aviation Hill	120+	~1 mile off Base
Lake Louise	85+	~3 miles off Base
Nemetz*	50	~3 miles off Base
Upper Government	90+	On Base
Lower Government	75+	On Base
Unaccompanied Housing	Barracks	On Base

*The community of Nemetz is under construction and expected to be complete in 2025.

Eight Factors for Determining Customary and Traditional Use

A community or area's customary and traditional use is generally exemplified through these eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the

handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit some or all of the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

In 2010, the Secretary of the Interior asked the Board to review, with Regional Advisory Council input, the customary and traditional use determination process, and present recommendations for regulatory changes. In June 2016, the Board clarified that the eight-factor analysis applied when considering customary and traditional use determinations is intended to protect subsistence use, rather than limit it. The Board stated that the goal of the customary and traditional use determination analysis process is to recognize customary and traditional uses in the most inclusive manner possible.

Prehistoric use of brown bear

Brown bears (*Ursus arctos middendorffi*) have been a distinct subspecies present on Kodiak Island for around 12,000 years (Talbot et al., 2006, as cited in Svoboda and Crye, 2023). Archaeological evidence from prehistoric sites across Kodiak Island documents that Kodiak Alutiiq people have consistently harvested and used brown bears for as long as they have been on the island (Van Daele 2002, Svoboda and Crye 2023). One of these sites is the Rice Ridge site, which is located about 12 miles south of contemporary Kodiak and dates to the Ocean Bay culture period (5600-2200 BC) (Knecht 1995, Kopperl 2003). Brown bear faunal remains typically rank below marine mammal remains in terms of frequency of occurrence (Clark 1974). Records from the Alutiiq Museum indicate that marrow was often extracted from brown bear femurs and other large bones, but that claws, teeth, and skulls were not found in archaeological middens (KARAC 1996: 21). Additional archaeological evidence highlighting the long-term importance of brown bears to people on Kodiak Island includes pictographs dating to at least 2,500 years ago and effigies of brown bears carved on decorative items dating to 3,800 – 1,000 years ago (Clark 1974, KARAC 1996: 21, ADF&G 2002).

Historic brown bear hunting practices

Written accounts from the late 1700s through the early 1900s describe traditional patterns of brown bear hunting on Kodiak Island, including in historic villages near contemporary Kodiak Road Zone communities. Prior to the adoption of rifles in the mid-1800s, hunters used lances, bow and arrow,

snares, and deadfall traps to hunt brown bears, and would approach bears against the wind to avoid being detected (Smith 1904, Clark 1974, Holmberg 1985, Steffian 2024). The arrows people used when hunting bears were around 32 inches long and had a 7-inch barbed bone point with an inserted slate blade (KARAC 1996: 20-21, ADF&G 2002). Some hunters approached bears in their dens or ambushed bears along habitually used trails (Steffian 2024). Stories from guided bear hunts in the early 1900s describe how Alutiiq hunters would use kayaks (*baidarkas*) to travel along inlet shores during springtime, searching hillsides to find bears foraging on young vegetation (Kidder 1904). As Steffian (2024:120) describes,

> Alutiiq hunters are renowned for spending hours watching a hillside to locate a den, observe an animal's daily habits, or identify a bear trail. Once a hunter knew when and where a particular bear was likely to go, he picked the perfect spot to ambush his prey. Careful observation and patience brought the animal to the hunter, saving a tough slog through the brush and preventing dangerous surprises.

All parts of the bear were consumed except the hide, bones, claws, head, and entrails (Holmberg 1985, OSM 1996, Van Daele 2002). These non-edible parts were often used to make tools, clothing, bedding, and handicrafts (Holmberg 1985, OSM 1996, Van Daele 2002). Brown bear meat was seasoned for several days and cooked by boiling or grilled on heated rocks, and leftover meat was preserved by salting. Bear fat was salted then boiled and consumed with dry fish (Holmberg 1985, OSM 1996, Van Daele 2002). Oral histories indicate that bear oil was highly prized and used medicinally and for cooking and baking (KARAC 1996: 20). Bear hides were either left at the kill site or used as bed covers or sleeping pads in *ciqlluat* (traditional sod houses, also referred to by the Russian term *barabaras*) (Holmberg 1985, OSM 1996, Schmidt 2018). Bones were used for tools and for traditional medicine, and teeth were used for adornment. Brown bear intestines and sinew were used to make rainproof parkas (*kamleikas*) and were considered stronger than sea lion intestines but were also generally harder to acquire (Black 1977, Holmberg 1985, Schmidt 2018, Steffian 2024). Oral histories on file at the Alutiiq Museum also document that the lining of brown bear lungs was used to make bags (KARAC 1996: 20).

Accounts written by trophy hunters in the early 1900s identify several brown bear hunting sites used by Alutiiq residents near what is now the Kodiak Road Zone (Kidder 1904, Smith 1904). These sites included Kiliuda Bay, English Bay, Woody Island, and Eagle Harbor—a historic Alutiiq village located on the southern shore of Ugak Bay that was occupied from the mid-1800s to early 1920s before residents relocated to Kodiak, Woody Island, and Old Harbor (Alutiiq Museum Archaeological Repository n.d., Kidder 1904, Smith 1904). Other sites used by local hunting guides in the early 20th century include Karluk Lake, Sturgeon River, Deadman Bay, and Uyak Bay (Steffian 2024). Local hunters who worked as guides in the early 1900s would typically hunt brown bear in the fall and spring, on either side of the commercial salmon fishing season (Steffian 2024).

<u>Cultural importance of bears</u>

Historic records, oral histories, and traditional stories document Kodiak Island residents' spiritual connections to bears (Svoboda and Crye 2023). Writing of his experience on a guided bear hunt in the

early 1900s, Kidder (1904) commented on the close relationship between bears and Kodiak Alutiiq people. He noted that bears had adapted to long-term hunting pressure by developing an acute ability to detect hunters through smell and hearing, and that people in turn had adapted hunting techniques that relied upon stealth (Kidder 1904). Similarly, Smith (1904: 231) described Kodiak Island residents' relationship with bears as becoming more important following declines in the sea otter population:

> The sea otter and bear have always been most intimately connected with the lives of the "Kadiakers," and have exercised a more important influence on their characters than any of their surroundings except the sea. It is no wonder, then, that the Native endowed these animals with a strength and size which easily takes them into the realm of mythology. The sea otter being nearly extinct, the bear is now made to shoulder all the large stories, and, strong as he is, this is no light burden.

Many of the oral traditions recorded in Kodiak villages are similar to those described by Alutiiq people on the Alaska Peninsula (Fall and Scarborough 1992, as cited in OSM 1996). Oral histories recorded from Kodiak Island Alutiiq elders tell of the similarity between bears and humans, "including the ability for bears to change into people and vice versa, and the mystical nature of bears because of their proximity to the spirit world" (ADF&G 2002: 2-3). Some of these oral traditions were recorded by Afognak Tribal elders as recently as 1997 (Christiansen 2013, Davis 2013), indicating the continuing cultural importance of brown bears on Kodiak Island.

These beliefs have shaped peoples' use of brown bears over time. For instance, oral histories document that the skulls of harvested bears were historically left in the field because it was considered disrespectful to use bear skulls and other parts, such as claws and teeth (KARAC 1996: 20-21). Hunters who had shot their first bear were encouraged to put their arms down the throat of the bear and rub a handful of mucous and slime on their bare chest to reduce fear of bears (Fall et al. 1992, Melovedoff et al. 1992, as cited in Fall and Scarbrough, 1996). Additional cultural practices related to brown bears that were documented in Kodiak villages in the 1980s include needing to discard clothes worn while burying someone before bear hunting, wearing amulets (probably made of bear claw) for good luck, cooking land and sea animals separately, and placing the vein from a bear around the wrist of a baby when they are born for strength (OSM 1996).

Brown bear management and hunting opportunities

Brown bear harvest opportunities have declined significantly since the early 1900s, providing important context for understanding changes in subsistence uses of brown bears on Kodiak Island. Some historical records suggest that use of sea otters and brown bears initially declined when Russian traders arrived in the late 1700s and limited local peoples' use of furbearing species (Schmidt 2018). Bear hides were considered a "minor fur" and sold for around the same price as river otter pelts, but bear harvest rates increased substantially when sea otter populations were over-hunted (Harper and McCarthy 2013). After the U.S. purchased Alaska in 1867, brown bear hunting for the commercial sale of hides increased, and by the 1920s, local residents reported low bear abundance (Troyer and Hensel 1967, as cited by OSM 1996, ADF&G 2002, Steffian 2024).

In 1925, the Alaska Game Commission prohibited commercial bear hunting and established a 3 bear per year harvest limit. In 1932, the harvest limit was further reduced to 2 bears per year, and bear hunting on Afognak Island was prohibited (Troyer 1961, ADF&G 2002, Svoboda and Crye 2023). These actions represented the first formal restrictions on subsistence bear hunting in more than 7,000 years (ADF&G 2002) and marked the start of a period characterized by greatly diminished brown bear hunting opportunities (**Appendix 1**).

Bear populations increased after commercial hunting was prohibited, which resulted in conflict between bears and cattle ranchers in the Womens Bay area. The Alaska Game Commission killed seven bears in 1939 to address this issue but recommended no additional bear-control efforts (Sarber 1939, as cited in Harper and McCarthy 2013). In the 1940s, commercial fishermen also called for predator control measures to reduce the brown bear population when Sockeye escapement declined in the Karluk River (Harper and McCarthy 2013). The Kodiak NWR was founded in 1941 in response to conflicts about conserving brown bears while also protecting residents and cattle (Harper and McCarthy 2013). Brown bear hunting diminished during the early 1940s, but the development that occurred during World War II negatively impacted bear populations. By 1942, the harvest limit was further decreased to one bear per year (Troyer 1961, ADF&G 2002).

Management of brown bear hunting became more intensive after statehood (1959), and several actions were taken between 1960 and 1985 to implement stricter harvest regulations and hunting requirements (**Appendix 1**). Conflict between cattle ranchers and bears on northeast Kodiak Island continued throughout the 1960s, which was managed by dispatching and relocating bears away from the road system and authorizing the use of dogs to hunt brown bears on northeast Kodiak from 1966-1969 (Harper and McCarthy 2013). Research from 1965-1969 indicates that residents of northeast Kodiak Island and military personnel stationed at the Kodiak Naval Station occasionally hunted bears around cattle ranches (Eide 1965). As of 2002, cattle ranching remained an important but smaller industry, and predation by bears had become less of an issue (ADF&G 2002). Today, there are very few operational ranches (Boots 2021).

By 1969, the harvest limit was reduced to 1 brown bear every 4 years and the winter hunt was eliminated for most of Kodiak Island (ADF&G 2002, Harper and McCarthy 2013). Nonlocal hunting demand increased in the early 1970s, and in 1976, the BOG established the limited permit system and hunt areas, with 60% of the permits allocated to Alaska residents. In 1985, the BOG required a registration permit (ADF&G 2002, Hicks 1999). By 1987, hunting on Afognak Island and on northeastern Kodiak Island changed from an unlimited permit hunt to a limited permit hunt, and by 1994 nonresident permits were awarded by lottery (Hicks 1995, Svoboda and Crye 2023). Management of brown bear hunting opportunities and arrests of some bear hunters after statehood caused many Alutiiq hunters to believe that all brown bear hunting was illegal, and some residents of Kodiak Island have described concealing brown bear harvest practices (OSM 1996, Steffian 2024). As a result, traditional harvest activities are generally characterized as declining after the 1960s (ADF&G 2002). As one village resident described (USFWS 1991: 28, as cited in OSM 1996):

> People are just scared. They are not scared of bears. They are scared of the bear people. They are scared of the Fish and Wildlife Service. I know an old man who lived here years ago, and he was a subsistence hunter and fisherman. He went out and shot himself a bear to eat and Fish and Wildlife, I don't know how they found out about it real quick, took his guns and was going to take the 70 year old man to jail, and all he did was go out to get himself something to eat.

Residents of the Kodiak Road Zone have direct access to the State registration hunts that occur in the road-accessible portions of the island (see **Relevant Federal Regulations**). Proximity to registration hunt areas, for which permits are unlimited, may facilitate Kodiak Road Zone residents' opportunity to hunt brown bear. However, compared to the areas where draw hunts occur, the road-accessible area of Kodiak Island has the lowest number of brown bears (**Table 4**), a higher concentration of hunters, and lower success rates (**Figures 1-2**). From 1990-2023, there were an average of 328 drawing permits hunted each year and an average of 139 registration permits hunted each year (Hicks 1999, Healy 2003, Harper 2011, Svoboda and Crye 2023, Svoboda, pers. comm. 2025). During this time, an average of 51% of hunters using drawing permits were successful compared to an average of 11% of hunters using registration permits (Hicks 1999, Healy 2003, Harper 2011, Svoboda and Crye 2023, Svoboda, pers. comm. 2025). Although approximately 66% of draw permits were issued to Alaska residents (with one-third of these allocated to Unit 8 residents from 1988-1996), the opportunity to hunt in draw hunt areas on Kodiak Island is extremely limited (OSM 1996, Harper and McCarthy 2015). In 2002, the likelihood of receiving a draw permit ranged from 2-6% (ADF&G 2002). Some residents along the road system and in remote villages on Kodiak Island have described difficulty getting brown bear draw permits, with some people reporting never having received one despite applying repeatedly (Williams 2003).

In addition to regulatory actions that decreased brown bear harvest opportunities, increased availability of deer and elk possibly also contributed to declines in subsistence harvest and use of brown bears. The Alaska Game Commission introduced deer, elk, and other non-native species to the Kodiak archipelago in the 1920s (ADF&G 2002). Notably, one trophy hunter in the early 1900s suggested that the introduction of deer could help "compensate the Native for his loss of bear meat" (Smith 1904: 252). Deer and elk populations grew throughout the 1940s – 1950s, and the first authorized hunts occurred in the early 1950s (Smith 1979, OSM 1997). Most early deer hunting occurred in the Chiniak Bay drainage near the Kodiak Road Zone, but by the mid-1950s, deer had expanded their range beyond the road system further south on the island (Smith 1979, OSM 1997). In the late 1950s, the hunting seasons for deer and elk were extended to incentivize harvest of these species rather than brown bears (Klein et al. 1958, Smith 1979).

The availability of deer has been described as one of the reasons subsistence use of brown bear has declined (KARAC 1996: 10, ADF&G 2002: 2-5, Steffian 2024). Today, deer and elk are important subsistence resources in Kodiak Road Zone communities. Household subsistence surveys conducted in 2021 indicated that about 46% of households in the Kodiak Road Zone use deer and 11% use elk, whereas no brown bear harvest or use was documented (Keating et al. 2024). Of the households surveyed, 56 (~17%) reported needing deer, 10 (~4%) reported needing elk, and only 1 (0.8%) reported

needing brown bear (Keating et al. 2024). However, residents interviewed in Kodiak villages in the late 1980s did not describe deer as replacing brown bear in subsistence diets (OSM 1996). During one Kodiak/Aleutians Council meeting, a resident of Kodiak Island shared that decline in brown bear use was due to hunting restrictions rather than changes in subsistence diets (KARAC 1996: 23-24):

> I mean it's the same thing with use of sea otter and—for example, there's a declining harvest of harbor seal and it has nothing to do with dietary preferences, more with availability of the species and concerns about being hauled in when you use certain animal parts, being hauled in for violations, you know, regulations. And for example, another introduced species, you know the bunnies we see all over the place and elk, there's just no evidence that those are, you know, favored over this traditional Native species. You know, people typically go for something that's going to give them the most calories out there and fit in well with the diet. The best source of oils are in these Native species, not the introduced ones.

Relationships between guided hunting and subsistence uses of brown bear

Similar to the ways subsistence and commercial fishing are intertwined on Kodiak Island (Mishler et al. 1995, USFWS 2004), the subsistence use of brown bears has evolved alongside the commercial harvest of bears (ADF&G 2002, Steffian 2024). Beginning in the late 1800s, Alutiiq hunters were often hired as bear hunting guides due to their knowledge of bear behavior, local terrain, hunting locations, and their bear processing skills (ADF&G 2002, Ramirez 2020). Steffian (2024: 122) describes that trophy hunting was not an Alutiiq tradition, but that:

> Alutiiq men became famous for their guiding expertise. Guides typically helped visiting hunters for about two weeks at a time, hiking the hills and spotting for large animals, positioning hunters for kills, and even telling them when to shoot. Guides were also responsible for butchering bears and packing the hides and skulls back to camp.

Accounts from commercial hunters dating to the early 1900s document that guides were hired from Afognak, Ouzinkie, and Eagle Harbor (Kidder 1904, Smith 1904). It is likely that guides were hired from other communities as well. These early accounts document that Alutiiq guides would typically consume the meat of bears harvested for trophy hunters (Kidder 1904).

Commercial hunting for bear hides was banned in 1925, but guided hunting continued and became more popular after World War II (Troyer 1961, Steffian 2024). Klein et al. (1958) estimated that in the late 1950s, 30-35 residents were employed as guides and collectively generated about $100,000 per year in the community of Kodiak. By 1959, 84% of the spring harvest and 75% of the fall harvest was taken by guided hunters (Troyer 1961). Alutiiq hunters regularly earned income from guiding fall and spring bear hunts through the 1960s (Steffian 2024). Elders interviewed on Kodiak Island recalled that guides would sometimes harvest other subsistence resources, such as goats, while guiding brown bear hunts (Williams 2003).

Native participation in guiding waned beginning in the 1970s as hunting regulations became stricter and as guide licensing requirements (paperwork and written tests) were implemented (Troyer 1961, Steffian 2024). Among the guiding regulations implemented was the use of Exclusive Guiding Areas (EGAs) from 1975-1988, which guaranteed a small number of guides access to hunting areas and hunting permits for their clients. The Alaska Supreme Court declared EGAs unconstitutional in 1988, which allowed more guides to work on Kodiak Island. The number of nonresident hunters increased as the number of guides increased, resulting in all nonresident permits being issued (Hicks 1995, 1998). Today, most brown bear guides are not Alutiiq (Steffian 2024), but guiding continues to be an important economic and social activity for residents in every Kodiak Island community (ADF&G 2002).

Concerns about the guiding industry were a notable aspect of the Kodiak/Aleutians Council's discussion regarding customary and traditional use determinations for brown bear in 1996 (KARAC 1996). Council members and public testimony emphasized concerns that allocating brown bear hunting permits for Kodiak Road Zone communities would significantly reduce the number of resident and nonresident permits available and would therefore negatively impact the guiding industry (KARAC 1996). However, one resident of the Kodiak Road Zone noted that guiding itself has been an important aspect of continuing subsistence practices (KARAC 1996: 31):

> …it appears to me, these guys [hunting guides] are carrying on the tradition of brown bear hunting and they're carrying it on through being involved in the guiding industry. It doesn't – nobody makes a lot of money from the guiding industry, but they do make a significant part of their income from it. And if the guiding industry's able to continue this way there will be Native people that are running their own guiding operations… But the point is that when I bring a hunter up here from outside, one of the most valuable part their experience is spending time with the Alutiiq people that we guide with because they get to experience some of that culture and tradition. When I bring somebody up here to hunt it isn't—I'm not selling bears, I'm selling hunts, and the hunt has to do with the place that we're doing it in and the culture and tradition that surrounds the place. It's all part of what's happening. So, I want to be the first to say, I don't believe that the argument that the [brown bear guided hunting industry] isn't a cultural and traditional relationship, that just doesn't hold any water.

Another registered guide from Kodiak Island reported that he would share brown bear meat with residents of remote villages, providing access to a desired subsistence food (KARAC 1996: 12):

> Well, I hauled bear meat into Larsen Bay village …because I'm a registered guide and they would ask me, if you get a bear, a young one, or one that's in the spring, would you bring in some meat because we'd like to have a taste.

Contemporary use of brown bears: ethnographic and harvest data

Ethnographic data indicates that many aspects of brown bear hunting that were documented in the late 1800s were still practiced or remembered in the late 1980s-1990s (Fall et al. 1992, Melovedoff et al. 1992, as cited in Fall and Scarborough, 1996). Much of this data was collected in villages rather than in road-accessible Kodiak communities but is considered relevant to this analysis given the close cultural connections and exchange of subsistence resources between residents of the road system and the smaller, remote villages (Keating et al. 2024).

In the late 1980s, ADF&G staff conducted research in Kodiak villages to evaluate the customary and traditional use of brown bears on Kodiak Island (OSM 1996). Available information does not clarify whether interviews were also conducted in road-accessible communities. Elders interviewed by ADF&G staff described that small groups of men, often relatives, would hunt brown bears together. Hunting alone was considered especially daring, with oral traditions referring to solo hunters as "real bear men." When hunts lasted multiple days, hunters would camp in *ciqlluat*. In contemporary times people travel by skiff rather than kayak, but the traditional practice of searching for bears by traveling upriver as far as possible and then tracking bears on foot continued. In spring, hunters would climb hills searching for bears or bear trails or would try to locate dens and wait for bears to emerge. In winter, bears were tracked after a heavy frost or snowfall, although this method was considered dangerous (OSM 1996).

Oral traditions reported that hunters used to take bears from dens, removing clothes before entering the den so that "if you see the bear he won't touch you" (OSM 1996: 17). As was documented in the early 1900s, most hunting occurred in November/December, or in April, soon after bears emerged from their dens. Bear meat was not preferred during summer or early fall, when bears were feeding on salmon (KARAC 1996: 19, OSM 1996). Elders described that Alutiiq men between the ages of 12-17 were trained to track and hunt bears by a senior male relative (usually father or uncle) (Fall et al. 1992, Melovedoff et al. 1992, as cited in Fall and Scarborough, 1996). The practice of bear hunting, which requires learning and understanding bear behavior, facing the danger of bear attacks, and going out on the land is often seen as just as important as being able to eat bear meat (KARAC 1996, OSM 1996). Knowledge about bears is an integral part of the culture that is passed on from older men to young boys, and some important rituals were attached to bear hunting (Mishler 2001). Harvested brown bears are shared widely, and when hunters harvest their first bear, they were obligated to give all the meat and hide to their uncle, who taught them how to hunt (OSM 1996). During public testimony provided during Kodiak/Aleutians Council meetings, residents of Kodiak Island described memories and stories of their family harvesting brown bears during spring, storing salted bear meat in barrels for winter, and using brown bear hides as mattresses when guests visited (KARAC 1996: 10, 19).

Available data indicate that residents of the Kodiak Road Zone rely primarily on areas in the northeastern portion of the island for brown bear hunting, possibly because permits in this area are unlimited, and the road-accessible areas of the island are easier to access. Subsistence research documents that in 1982, residents of the Kodiak Road Zone only reported hunting brown bear in the road-accessible portions of the island (KANA and ADF&G 1983). Harvest data from 1965-1996

document that 66% of brown bears harvested by Kodiak Road Zone residents were taken on non-Federal lands, which are primarily those around Kodiak City and on Afognak Island (OSM 1996).

Household surveys conducted by the division of subsistence provide additional insight on the use of brown bears by Kodiak Island residents. Data spanning from 1982 to 2021 shows consistent but low harvest of brown bears by residents of Kodiak City, Kodiak Station, Mill Bay, Womens Bay, and Chiniak communities, with the percentage of households using brown bear ranging from 1.3 – 3.2% (**Table 6**). Across survey years, the percentage of households hunting brown bear ranged from 1.6 – 9.7% (**Table 6**). Sharing of bear meat was infrequently documented in these household surveys (**Table 6**). Previous household subsistence surveys suggest that residents of several remote Kodiak Island communities use, hunt, and share brown bear more frequently than residents along the road system (**Table 6, Appendix 2**). However, use of brown bears is evident across all Kodiak Island communities, with 23% of Kodiak Road Zone residents surveyed in 1983 reporting having ever eaten brown bear. Similar proportions were recorded in several remote Kodiak villages (**Table 7**).

Because bear hunting tends to be a specialized activity conducted by a small number of households (and limited by permit availability), it is possible that bear hunting activity may be missed by subsistence surveys (OSM 2024). Harvest records from 1990-2023 indicate that residents along the Kodiak road system (excluding residents of Chiniak) consistently harvest brown bears, with an average of 13.4 bears harvested per year, representing an average of 7.6% of the total brown bear harvest in Unit 8 (**Figure 3**). In comparison, residents of remote communities (including residents of Chiniak) harvested an average of 1.1 bears per year, representing an average of 0.6% of the total brown bear harvest in Unit 8 (**Figure 3**). Likewise, residents along the Kodiak road system (excluding residents of Chiniak) consistently seek permits to harvest brown bears, with an average of 168.5 permits issued per year, representing an average of 24.3% of all brown bear permits issued each year in Unit 8 (**Figure 4**). In comparison, residents of remote communities (including Chiniak) received an average of 5.8 permits per year, representing an average of 0.9% of all brown bear permits issued in Unit 8 (**Figure 4**). This data cannot be further disaggregated, so it is not possible to determine proportion of permits issued to or harvest taken by residents of Kodiak City, Kodiak Station CDP, or other road system CDPs.

Recent research documents that older residents of the Kodiak Road Zone, some of whom used to live in remote Kodiak Island villages, have consumed brown bear throughout their lives (Keating et al. 2024) These residents describe brown bear meat as a staple during their childhood, noting that people historically preferred to harvest smaller or younger bears in the spring and salt the meat so that it could be preserved and eaten during winter (Keating et al. 2024). One resident described that over time, people began harvesting larger bears, which required different processing techniques (Keating et al. 2024: 135):

> …growing up they used to shoot a bear in the spring, and we'd be eating on that, I remember. And then in the late '60s I used to shoot bear for the village, for subsistence. And back then, they wanted the smallest bear you could shoot. Things changed a lot over the years, now they try to get the biggest one, I don't think it's, I

> don't think they could even chew it. I guess it's not too bad if you cook it right, I remember having hamburger made out of it. And maybe meat and gravy. It was, we survived, we ate it…

Some of the available information may suggest that residents of the Kodiak Road Zone may not use brown bears in customary and traditional ways to the same degree as their neighbors in off-road communities. Residents of more remote villages have previously expressed concern about hunting pressure from the larger community in northeastern Kodiak Island (KANA and ADF&G 1982) and a small number of public comments submitted in 1996 asserted that brown bears were no longer used for subsistence in Kodiak (OSM 1996a). In the early 2000s, a citizens' group that developed the Kodiak Archipelago Bear Conservation and Management Plan recommended reducing the population of brown bears along the road system to reach population levels deemed tolerable by residents (ADF&G 2002). The plan also reported that people had made conscious decisions to reduce the number of bears in the road system area and did not address subsistence uses of brown bear by residents of the Kodiak Road System (ADF&G 2002). In 2021, subsistence research documented limited use of brown bear and provided limited ethnographic or descriptive accounts of contemporary brown bear use along the road system (Keating et al. 2024).

Table 4. Estimated total number of brown bears in Kodiak Island management subunits. (Harper 2011, Svoboda and Crye 2023).

Brown bear harvest subunit	1995	2005	2017
Afognak and Northern Islands / Northern Islands[a]	330	430	328-549
Northwestern Kodiak / Northwest Kodiak[a]	808	908	681-1134
Northeastern Kodiak (Road System) / Northeast Kodiak[a]	**90**	**101**	**78-129**
Southeastern Kodiak / East Kodiak[a]	471	744	573-560
Southwestern Kodiak / Southwest Kodiak[a]	1019	1094	920-1381
Aliulik Peninsula	262	249	144-239

[a]Subunit management names as listed by Harper (2011).

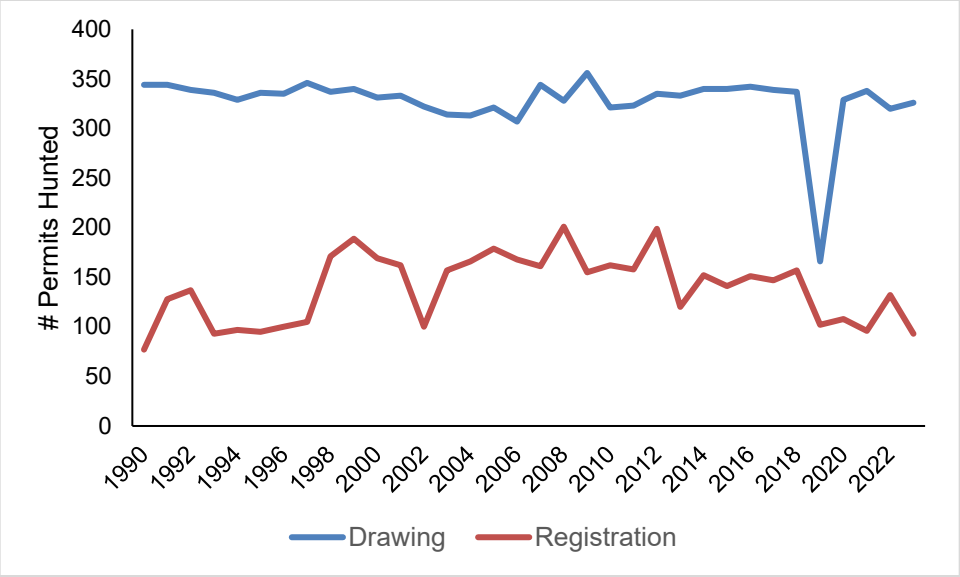


Figure 1. Total number of Unit 8 brown bear draw permits and registration permits hunted between 1990 to 2023 (Hicks 1999, Healy 2003, Harper 2011, Svoboda and Crye 2023, Svoboda, pers. comm. 2025). Drawing permit hunts occur in Unit 8 remainder and registration permit hunts are in/near the Kodiak Road Zone (Hicks 1999, Harper 2009, 2011, Svoboda and Crye 2018).

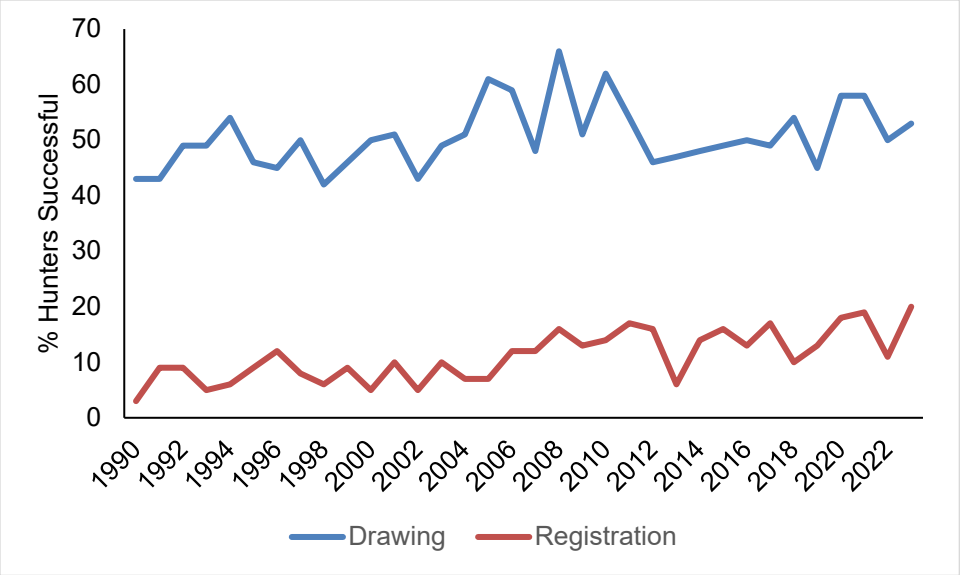


Figure 2. Percentage of hunters who successfully harvested a brown bear in Unit 8 under State drawing permit and registration permit between 1990 and 2023 (Hicks 1999, Healy 2003, Harper 2011, Svoboda and Crye 2023, Svoboda, pers. comm. 2025). Drawing permit hunts occur in Unit 8 remainder and registration permit hunts are in/near the Kodiak Road Zone (Hicks 1999, Harper 2009, 2011, Svoboda and Crye 2018).

Table 6. Subsistence household survey data on prevalence of brown bear use across sampled households in Kodiak City, Mill Bay CDP, Womens Bay CDP, Chiniak CDP, and Kodiak Station CDP (KANA and ADF&G 1983, Schoreder et al. 1987, Fall and Utermohle 1995, Keating et al. 2024). HH indicates household. Harvest data cannot be reliably compared across survey years (Keating et al. 2024) but provide insight on the minimum brown bear use across communities.

Community	**Year**	**% HH using**	**% HH hunting**	**# Bears harvested**	**%HH giving**	**% HH receiving**
Kodiak City	1982	1.3	1.9	1	-	-
	1991	0	2.0	0	0	0
	1992	0	2.0	0	0	0
	1993	1.0	0	0	0	1.0
	2021	**0**	**1.6**	**0**	**0**	**0**
Mill Bay, Womens Bay, & Chiniak	1991	1.3	2.6	1	1.3	0
	2021	**0**	**0**	**0**	**0**	**0**
Kodiak Station	1982	0	0	-	-	-
	1991	3.2	9.7	1	3.2	3.2
	2021	**0**	**0**	**0**	**0**	**0**

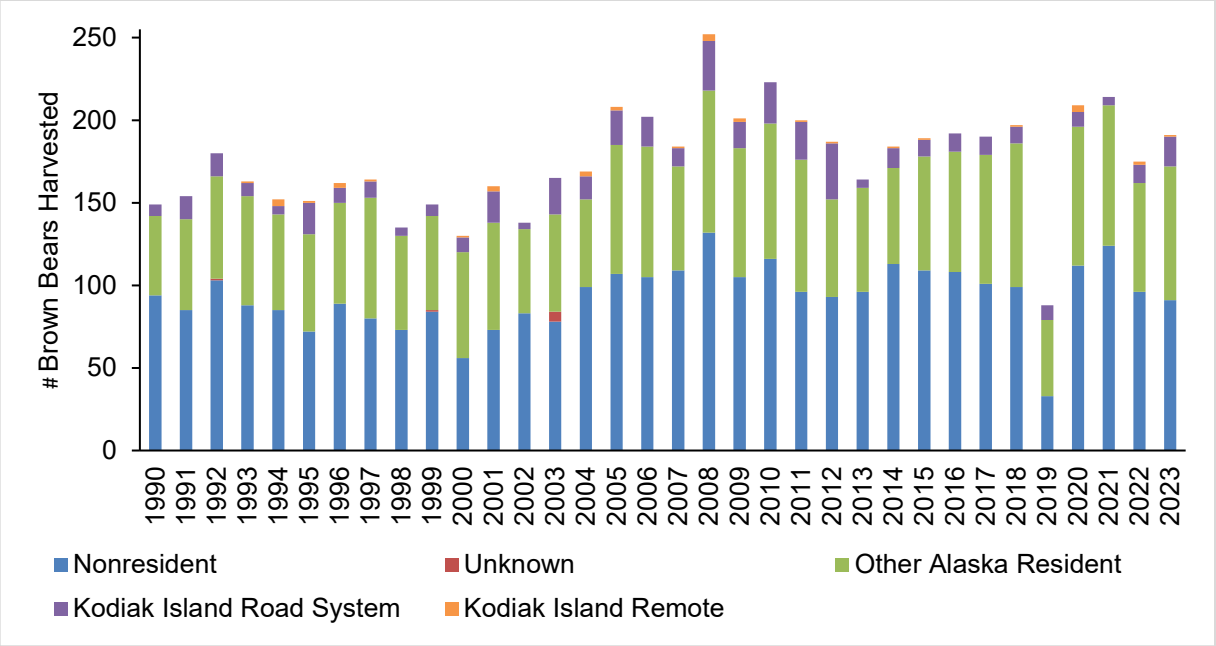


Figure 3. Number of brown bears harvested each year in Unit 8 by different user groups. Kodiak Island Road System includes all residents of Kodiak Island living along the road system except for residents of Chiniak CDP. Kodiak Island Remote includes residents of Chiniak CDP and residents of remote Kodiak Island communities (Svoboda, pers. comm., 2025).

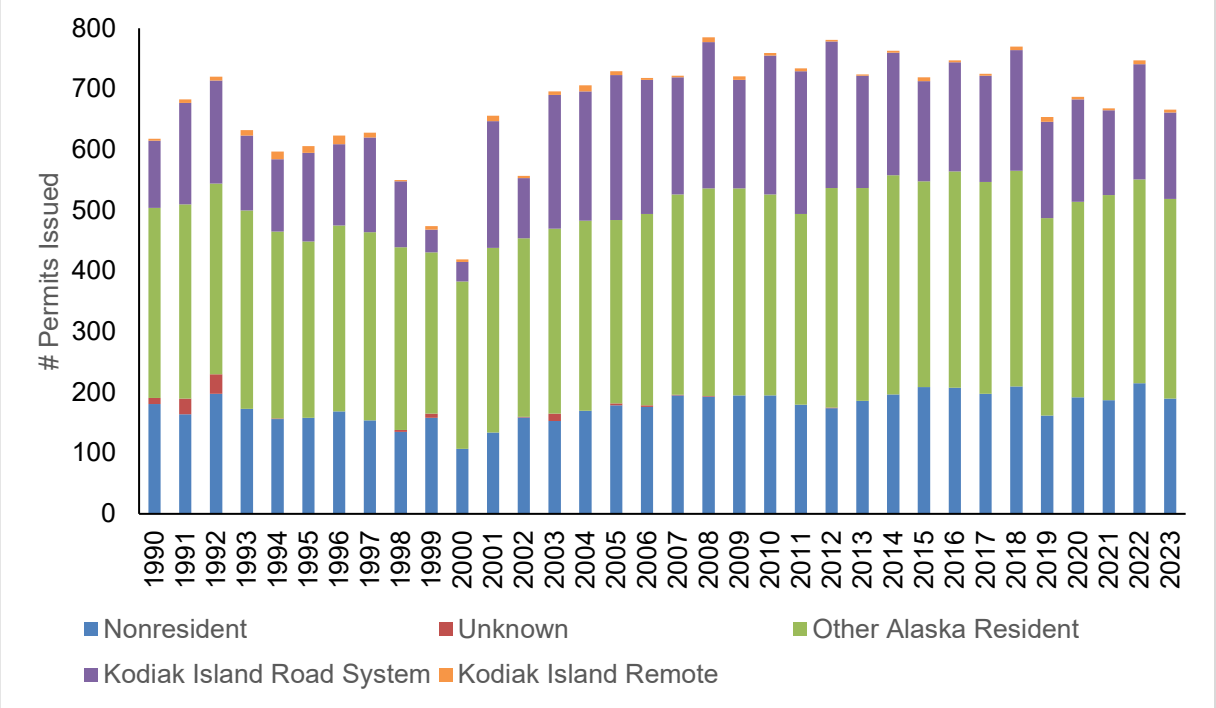


Figure 4. Number of drawing and registration hunt permits issued to different user groups to hunt brown bear in Unit 8 from 1990 – 2023. Kodiak Island Road System includes all residents of Kodiak Island living along the road system except for residents of Chiniak CDP. Kodiak Island Remote includes residents of Chiniak CDP and residents of remote Kodiak Island communities (Svoboda, pers. comm., 2025).

Table 7. Responses to the question, “Have members of your household eaten brown bear?” in Kodiak Island communities, 1983 (ADF&G 1983, as cited by OSM 1996). Responses should be considered a minimum because phrasing of question may not have prompted all responses to speak to lifetime experience, and some respondents may be fearful of reporting due to perceptions the activity is illegal (OSM 1996).

Community	Yes (%)	No (%)	Missing (%)	Total # surveyed
Akhiok	24	76	0	21
Chiniak	29	71	0	17
Karluk	15	85	0	20
Kodiak Road Zone	**23**	**77**	**0**	**155**
Larsen Bay	63	37	0	32
Old Harbor	34	58	8	77
Ouzinkie	9	91	0	32
Port Lions	16	82	2	55

Alternative(s) Considered

One alternative to this proposal would be to recognize the customary and traditional uses of brown bears by any Kodiak resident living along the road system, except those residing in Kodiak Station CDP. Recognizing customary and traditional use of brown bears in this way may reduce user confusion and simplify potential permit allocation by land management agencies and would exclude military staff residing on base and some military staff residing in military housing off base. However, the Kodiak Station CDP includes both military residents and other residents, and excluding the entire CDP may improperly eliminate some subsistence users. This alternative does not specifically exclude the Pacific Spaceport Complex because it appears there are currently no residences at this facility and any potential lodging built in the future would be for temporary residents who would not qualify as federally qualified subsistence users.

Another alternative considered was to simplify the customary and traditional use determination language to “Residents of Unit 8, except residents of Nemetz, the U.S. Coast Guard Base and residents of the Pacific Spaceport Complex-Alaska.” If WP26-32 is adopted as submitted, all communities on Kodiak Island would have C&T for brown bear on Unit 8, so naming all the individual communities provides unnecessary regulatory complexity. However, this alternative would also include the eight residents of the Aleneva CDP, which was not part of this analysis.

Effects and Discussion

If this proposal is adopted as written, residents Kodiak, defined as anyone living along the road system except for residents of the U.S. Coast Guard Base, the Nemetz neighborhood located off Base, and residents of the Pacific Spaceport Complex, would gain a customary and traditional use determination for brown bear in Unit 8. This means that these residents would become federally qualified subsistence users eligible to hunt brown bear on Federal public lands in Unit 8 under Federal subsistence regulations. However, residents of Kodiak would not be able to harvest brown bears under Federal subsistence regulations unless the Board also adopts WP26-33, which requests the allocation of up to 4 Federal subsistence permits for residents of this area to harvest brown bear in Unit 8.

OSM PRELIMINARY CONCLUSION

Support Proposal WP26-32 **with modification** to revise the customary and traditional use determination area to include all residents of Kodiak Island road system except for residents of the U.S. Coast Guard Base.

The draft regulations read:

Customary and Traditional Use Determination—Brown Bear

Unit 8	*Residents of Akhiok, Larsen Bay, Karluk, Old Harbor, Ouzinkie, and Port Lions,* ***and the Kodiak Island road system, except for residents of the U.S. Coast Guard Base.***

Justification

Available information provides robust documentation that brown bears have been customarily and traditionally used by residents of Kodiak Island, including in the northeast portion of the island along what is now the present-day road system. Available harvest data indicates that residents along the Kodiak Island road system have consistently hunted and harvested brown bears at low levels proportional to the community's population size. Additionally, residents of remote villages are increasingly relocating to the Kodiak road system area, and there are strong relationships and sharing of subsistence foods between residents along the road system and residents in the more remote communities on Kodiak Island.

If this proposal is adopted, all residents of Kodiak Island would have a customary and traditional use determination for brown bear in Unit 8. The proposed modification therefore simplifies regulatory language to include all residents of Kodiak Island rather than listing individual communities. Excluding the U.S. Coast Guard Base from this determination follows determinations made by the Board (FSB 2023). Other Coast Guard housing located off base are not excluded in this proposed modification because it appears there is no clear way to delineate those communities from other

residents of Kodiak Station CDP. Additionally, this proposed modification does not specifically exclude the Pacific Spaceport Complex because it appears there are currently no residences at this facility and any potential lodging built in the future would be for temporary residents who would not qualify to hunt under Federal subsistence regulations.

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APPENDIX 1

Table A1. Chronological overview of regulatory actions and other events that have influenced brown bear hunting by residents of Kodiak Island.

Year	Action / Event Influencing Bear Harvest
Late 1700s	Local use of sea otter and bear declined after Russian contact because people were denied use of the resource (Holmberg 1855, at cited in Schmidt 2018).
1867	Alaska was purchased by the U.S. and commercial hunting to sell bear hides grew in popularity. Alutiiq hunters were commonly hired as guides (ADF&G 2002, Ramirez 2020, Svoboda and Crye 2023).
1920s	Alaska Game Commission introduced deer, elk, muskrat, beaver, mountain goats, and snowshoe hare to Kodiak Island (ADF&G 2002).
1925	Alaska Game Commission abolished commercial bear hunting and established a 3 bears per year harvest limit (Svoboda and Crye 2023).
1926	Alaska Game Commission prohibited harvest of bears during summer months except when necessary for defense (Svoboda and Crye 2023).
1931	Brown bear season was restricted to September 1 through June 20 with a bag limit of 2 bears per year (Troyer 1961).
1932-1940	Brown bear hunting was prohibited on Afognak Island and the area was managed as a bear sanctuary (ADF&G 2002).
1939-1945	World War II resulted in significant development and a population increase in Kodiak from 400 to more than 20,000 people (ADF&G 2002, Troyer 1961).
1942	Brown bear harvest limit was reduced to 1 bear per year (Troyer 1961).
1940s	Deer populations had expanded and occupied the northeast portion of Kodiak Island (Smith 1979).
1940s	Trophy hunting became more popular following World War II (ADF&G 2002).
1953	First deer hunting season occurred, with most hunting taking place in Chiniak Bay drainage near the Kodiak Road Zone (Smith 1979).
1954	The brown bear season was reduced to September 16 – May 31 (Troyer 1961).
1957	The taking of female brown bears accompanied by cubs was prohibited (Troyer 1961).
1958	The taking of brown bear cubs was prohibited (Troyer 1961).
1960	Alaska BOG required brown bear hides to be sealed, and the brown bear season was reduced to October 1 – May 31 (Svoboda and Crye 2023, Troyer 1961).
1967	Fall bear hunting at Karluk Lake drainage closed by emergency order (Hicks 1999).
1967	Same-day airborne hunting of brown bear was prohibited, and regulations were implemented required hunters to remove brown bear skulls from the field (ADF&G 2002), which contrasts with the traditional Alutiiq practice of leaving skulls in the field (KARAC 1996: 20, Van Daele 2002, Steffian 2024).
1968	Skull sealing requirements began (ADF&G 2002).
1968	Fall bear hunting at Karluk Lake drainage was closed by regulation (ADF&G 2002, Hicks 1999).
1968	U.S. Fish and Wildlife Service (USFWS) introduced a land-use permit required to hunt bears on Kodiak NWR due to high harvest (ADF&G 2002, Hicks 1999).
1969	The harvest limit for brown bears was reduced to 1 bear every 4 years, and the winter hunt was eliminated for most of the archipelago (ADF&G 2002, Harper and McCarthy 2013).
1970	Alaska BOG prohibited shooting bears from planes or poisoning bears (ADF&G 2002).
1971	ANCSA legislation was passed, resulting in large areas of the coastline including Karluk River drainage, Sitkalidak, Spruce and Whale islands, and most of the forested areas of

	Afognak and Raspberry islands being conveyed to Native corporations; these areas included 310,000 acres of bear habitat on Kodiak NWR (Harper and McCarthy 2013).
1972-1973	Nonlocal hunting pressure increased, in part due to restricted season length on Alaska Peninsula and the passage of the Marine Mammal Protection Act, which eliminated polar bear hunting opportunities (ADF&G 2002).
1975	USFWS began limiting land-use permits to hunt bears on Kodiak NWR (Hicks 1999).
1975	The Guide Licensing and Control Board assigned Exclusive Guiding Areas to 20 guides in Unit 8, guaranteeing each guide access to hunting permits for their clients (Hicks 1995, 1998).
1976	Alaska BOG introduced 26 hunt areas and a limited permit hunting system with 60% of permits allocated to Alaska residents, prompting USFWS to eliminate the land-use permit required to hunt bears on Kodiak NWR (ADF&G 2002, Hicks 1999).
1970s	Alaska Board of Game authorized the take of bears in defense of life and property (5 AAC 92.410) and liberalized hunting regulations near cattle ranches on northeast Kodiak (Harper and McCarthy 2013).
1980s	Conflict between bears and deer hunters increased as the deer population grew (ADF&G 2002).
1985	Alaska BOG established a registration permit requirement for brown bear hunting in Unit 8 (ADF&G 2002).
1986	Alaska BOG made a positive customary and traditional use determination for the communities off the Kodiak Island road system (OSM 1996).
1987	Alaska BOG made a negative customary and traditional use determination for the communities off the Kodiak Island road system after no subsistence permits were acquired in the 1986-1987 regulatory year (ADF&G 2002, OSM 1996).
1987	Hunting on northeast Kodiak Island and Afognak Island changed from unlimited permit to a limited permit hunt (Svoboda and Crye 2023).
1988	The Alaska Supreme Court declared Exclusive Guiding Areas unconstitutional, resulting in increased competition among big game guides and an increase in nonresident hunting (Hicks 1995, 1998).
1989	Exxon Valdez oil spill deterred subsistence hunting across Kodiak Island (Fall, 1999).
1994	Alaska BOG began awarding nonresident hunting permits by lottery (Hicks 1995).
1995	Alaska BOG implemented regulations in 9 hunt areas on southern Kodiak Island requiring guided nonresident hunters to harvest either male bears or females with skulls of a certain size; each violation of this requirement would result in 1 fewer permit for nonresidents in the following year (Hicks 1998).
1996	Federal Subsistence Board recognizes the customary and traditional use of brown bears in Unit 8 by residents of Old Harbor, Ouzinkie, Port Lions, Larsen Bay, Akhiok, and Karluk (FSB 1996).
1997	Federal Subsistence Board establishes a subsistence brown bear hunt on Federal public lands of Unit 8 (62 FR 29040 [May 29, 1997]).
Late 1990s	Around 80% of lands conveyed through ANCSA had been repurchased using funds from Exxon Valdez oil spill settlements or acquired through conservation easements, with the explicit goal of protecting bear habitat (ADF&G 2002, Harper and McCarthy 2013).
2007	Alaska BOG divided Afognak Island into three distinct hunt areas and implemented a regulation stating that a bear wounded by a hunter counts towards the hunter's bag limit for that regulatory year regardless of whether the bear was harvested (Svoboda and Crye 2023).

2012	Federal Subsistence Board defers action on determination of customary and traditional use of brown bears in Unit 8 by residents of Ninilchik, in deference to Kodiak Aleutians Regional Advisory Council recommendation to oppose the proposal (FSB 2012).
2014	Federal Subsistence Board increased the number of brown bear subsistence permits available for Kodiak villages, by 1 additional permit for residents of Akhiok and 1 additional permit for residents of Old Harbor (OSM 2014).
2023	The Kodiak Aleutians Subsistence Regional Advisory Council voted to support a proposal that would allow for the limited sale of brown bear hides harvested under Federal subsistence regulations, stating this would benefit subsistence users but expressing concern over the culturally appropriate nature of selling brown bear parts and concern over potential conservation impacts (KARAC 2023).
2024	Federal Subsistence Board eliminated the requirement for federally qualified subsistence users hunting brown bear in Unit 8 to obtain a State locking tag (89 FR 70351 [August 29, 2024]).
2025	The Kodiak Aleutians Subsistence Regional Advisory Council voted to oppose a proposal that would allow for the domestic sale of brown bear hides harvested under Federal subsistence regulations, stating it was not culturally appropriate in their region to sell brown bear parts (KARAC 2025).

APPENDIX 2

Table A2. Subsistence household survey data on prevalence on brown bear use in Kodiak Island villages (CSIS 2025). HH indicates household.

Community	Year	% HHs Using	% HHs Hunting	# Bears Harvested	% HHs Giving	% HHs Receiving
Ouzinkie	1982	0	0	0	-	-
	1986	0	0	0	0	0
	1989	0	0	0	0	0
	1990	0	0	0	0	0
	1991	0	0	0	0	0
	1992	0	0	0	0	0
	1993	0	0	0	0	0
	1997	0	0	0	0	0
	2003	0	0	0	0	0
	2022	0	0	0	0	0
Port Lions	1982	0	0	0	-	-
	1986	3.3	3.1	2	1.5	0
	1989	2.8	2.8	1	0	0
	1993	0	2.2	0	0	0
	2003	0	0	0	0	0
	2022	1.9	1.9	0	0	1.9
Akhiok	1982	0	0	0	-	-
	1986	0	0	0	0	0
	1989	0	0	0	0	0
	1992	0	0	0	0	0
	2003	0	9.1	0	0	0
	2018	0	0	0	0	0
Karluk	1982	5.0	-	1	-	-

	1986	0	0	0	0	-
	1989	0	0	0	0	-
	1990	5.9	0	0	0	5.9
	1991	0	0	0	0	0
	2003	0	0	0	0	0
Larsen Bay	1982	25.0	-	1	-	-
	1986	5.4	0	0	0	5.4
	1989	0	0	0	0	0
	1990	2.9	0	0	0	2.9
	1991	0	0	0	0	0
	1992	0	0	0	0	0
	1993	2.5	0	0	2.5	2.5
	1997	19.2	7.7	2	7.7	15.4
	2003	12.0	0	0	0	12.0
	2018	9.5	4.8	1	4.8	4.8
Old Harbor	1982	10.4		4	-	-
	1986	11.4	4.5	2	4.5	9.1
	1989	0	0	0	0	0
	1991	7.1	0	0	2.4	7.1
	1997	11.6	2.3	1	2.3	9.3
	2003	3.9	3.9	0	1.9	3.9
	2018	1.3	1.3	4	1.3	0