THE WILDLIFE SOCIETY
ALASKA CHAPTER

The Alaska Chapter of The Wildlife Society strives to enhance the ability of wildlife professionals to conserve biological diversity, sustain productivity, and ensure responsible use of wildlife resources in Alaska for the benefit of society.

February 13, 2024

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Bureau of Land Management
BLM Alaska State Office
222 West 7th Avenue #13
Anchorage, AK 99513

RE: Alaska Chapter of The Wildlife Society Comments on the ANCSA 17(d)(1) Withdrawals Draft Environmental Impact Statement

Dear Ms. Jones,

This letter represents the Alaska Chapter of The Wildlife Society's public comments to the Bureau of Land Management (BLM) on the Draft Environmental Impact Statement (DEIS) for ANCSA 17(d)(1) withdrawn lands (D1 Withdrawals). We appreciate the opportunity to comment on this important process.

The Wildlife Society (TWS) was founded in 1937 and is a non-profit scientific and educational association of over 11,000 professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to inspire, empower and enable wildlife professionals to sustain wildlife populations and habitats through science-based management and conservation. Our professional membership represents and serves the community of scientists, managers, educators, technicians, planners and others who work actively to study, manage and conserve wildlife and its habitats worldwide. The Alaska Chapter of TWS has about 200 members in Alaska representing wildlife scientists and resource managers including those working for state and federal agencies, Native organizations, universities, non-profit groups and consulting biologists. Our collective knowledge regarding wildlife and its habitat in Alaska is our greatest strength, so we offer these comments in hopes that they will be used to improve the analyses in the DEIS.

Conservation of habitat and connectivity for wildlife is a foundation of sound management. Covering approximately 28 million acres of Alaska, the D1 Withdrawals being considered in this DEIS play an important role in such efforts. As we describe below, there are many scientific concerns about the effects of revoking existing D1 Withdrawals and opening the lands to leasing and development. In light of these, The Alaska Chapter of TWS supports maintaining existing D1 Withdrawals (Alternative A: No Action) for habitats and species across the state.

We appreciate the attention that has been shown in the DEIS to analyzing the potential impacts of revoking D1 Withdrawals. We offer the comments below to raise additional issues that should be considered in the Final EIS (FEIS) as well as recommendations for improvement in the document. We begin with a focus on the need to improve consideration of landscape connectivity in the FEIS before turning to species-specific concerns. We conclude with recommendations for improvement to the Alaska National Interest Lands Conservation Act (ANILCA) Section 810 Evaluation and Reasonably Foreseeable Development Scenario.

Connectivity

Landscape connectivity is the degree to which the landscape facilitates or impedes movement among resource patches. Connectivity reduces potential disturbance to wildlife by giving options to navigate through areas of reduced habitat quality, degradation, and fragmentation, helping maintain ecological resilience at the landscape level and protecting biodiversity. The goal of corridors for connectivity in this context is to retain landscape permeability between conservation areas and public lands. This affords wildlife resilience and adaptability by allowing species to respond as environmental conditions change. Movement is among the best tools wildlife have to facilitate adaptations to climate change. The freedom for unhindered movement is necessary for wildlife to access variable habitat, as climate change is rapidly inducing changes on the landscape like melting permafrost, declining snowpack, and changes to plant composition and phenology. When habitat is fragmented by barriers (e.g. human infrastructure) wildlife are unable to access the extent of their needed range which can also inhibit major lifecycle events such as breeding, birthing, rearing of young, foraging, or migrating (Hanski 1998). In addition, challenges to wildlife species anticipated with climate change would be highly exacerbated if habitat connectivity is lost.

Maintaining landscape connectivity is not only a key tenet of wildlife ecology, it has also been recognized as a founding motive of the Biden Administration's America the Beautiful Initiative, which aims "to conserve, connect, and restore lands and waters across the nation…and help combat climate change" (White House 2021, emphasis added). Maintenance of connectivity also is protected by law. The DEIS affirms that the use of D1 Withdrawals must be "consistent with the purposes of ANCSA 17(d)(1), which requires that 'the public interest in these lands is properly protected,' including factors such as subsistence hunting and fishing, habitat connectivity, protection of cultural resources, and protection of threatened and endangered species" (p.ES-3, emphasis added).

The connectivity of landscapes is key to establishing the overall persistence, strength, and integrity of the remaining ecological interactions (Stephenson and Calcarone 1999) and must be considered in the DEIS. Despite being such an important consideration for wildlife, terrestrial mammal habitat connectivity is scarcely mentioned in the DEIS.

The BLM needs to coordinate research, management, and planning with adjacent lands to ensure that the goals of habitat connectivity and resilience are achieved. D1 Withdrawals are an

important component of a greater, fully intact ecosystem as a conservation system, and BLM must consider the role of these lands beyond their borders. We encourage BLM to include meaningful discussion and effort in identifying, managing, and protecting wildlife corridors. The FEIS should include an analysis of habitat connectivity, identification of potential wildlife corridors, and management alternatives for protecting and/or restoring important corridors. BLM has tools at its disposal that can be applied to designate and protect wildlife corridors, as has been demonstrated in two existing Resource Management Plans (Bering Sea-Western Interior RMP and Central Yukon draft RMP). To appropriately designate and protect wildlife corridors the BLM should:

- Collaborate with other state and Federal agencies and non-governmental groups to obtain current data regarding crucial wildlife habitat and corridors;
- Connect already-designated conservation areas and other protected lands to ensure that wildlife populations have the ability to easily move between large areas of protected crucial habitat;
- Identify focal species for identifying important wildlife corridors that will also act as indicators for how well the wildlife corridors are working; and
- Incorporate data on core habitat, linkages, and buffer areas into the FEIS, in addition to wildlife corridors, to best guide other management decisions and future research.

The FEIS would benefit from a literature review of the BLM RMPs, Comprehensive Conservation Plans of nearby National Wildlife Refuges, and additional State Management Plans under the Alaska Department of Natural Resources (DNR) that already feature the importance of wildlife connectivity corridors. We provide several examples below that could be integrated into discussions and impact analyses in the FEIS. The D1 Withdrawal EIS process presents an exciting opportunity to maintain protections for connectivity corridors and areas with sensitive habitat that have already been identified by BLM RMPs and occur on D1 Withdrawals connecting public lands. D1 Withdrawals serve as wildlife movement corridors providing connectivity, as the RMPs below delineate.

<u>Bering Sea-Western Interior</u>

The Bering Sea-Western Interior (BSWI) RMP identified connectivity corridors using an analysis of landform features to design a climate resilient connection between the Yukon Delta National Wildlife Refuge and the Innoko National Wildlife Refuge (BLM 2021). The analysis takes a geodiversity approach by using topography, soil, and hydrologic features because those characteristics are less dynamic and more enduring than species composition or land cover. This approach assumes that similar ecosystem types and functions will occur in similar topographic conditions and that similar topographic niches (e.g., steep, high elevation, sunny slopes) can host similar ecological assemblages. With this approach, BLM identified two major connectivity corridors (North Connectivity Corridor and South Connectivity Corridor) with restricted leasing and development to facilitate adaptive management by retaining connectivity between USFWS refuges in the planning area (see BLM 2021 Map A-10). During pre-planning for both the BSWI and Central Yukon RMPs BLM participated in and supported studies that identified wildlife connectivity corridors and ecological benchmarks that considered focal species

and the locations of adjacent conservation units such as refuges and parks (Lisgo et al. 2018, Magness et al. 2018). BLM should incorporate results of these studies by identifying and recommending specific connectivity corridors in the FEIS. Blocks of D1 Withdrawals within connectivity corridors should be retained.

Bay Area

The Bay Planning Area DNR management plan incorporates the importance of viewing landscapes at a broad-scale, complex level:

> "When issuing permits and leases or otherwise authorizing the use or development of state lands, DNR will recognize the requirements of the activity or development and the effects to habitat when determining stipulations or measures needed to protect fish, wildlife, or their habitats. The costs of mitigation relative to the benefits to be gained will be considered in the implementation of this policy. The underlying integrity of the ecological system and traditional way of life in this region is to be maintained to the maximum extent practicable." (DNR 2013 p.2-9)

The FEIS would be strengthened by incorporating such a perspective with respect to habitat connectivity.

East Alaska

The Alaska DNR draft Copper River Basin Area Plan highlights the protection and management of valuable environmental areas, essentially describing connectivity corridors:

> "The state will provide, in its design of land disposals, an open-space system to preserve important fish and wildlife habitats and natural areas such as shorelands, freshwater wetlands, and riparian lands. As part of this design process, consideration should also be given to the connectivity of habitat types as well as access to fish and wildlife resources. Where appropriate other design and management approaches may be used; these may complement an open space system or substitute for it, although preference should be given to the provision of an open space system. These areas should be designed to provide the necessary linkage and continuity to protect or increase values for human uses and wildlife movements. In some places, large areas may be protected to provide adequate terrestrial habitat" (DNR 2023 p.2-52).

Ring of Fire

The Ring of Fire RMP describes recommendations for Kodiak connectivity. Kodiak NWR land use and acquisition are listed in the Kodiak Archipelago Bear Conservation and Management Plan and include "continuing to acquire small parcels of high-priority bear and salmon habitat, recognizing subsistence activities, retaining salmon rehabilitation plans, and striving to ensure free movement of bears through their natural ranges" (BLM 2006 p.3-144, emphasis added).

Caribou

Caribou (*Rangifer tarandus*) are a key species in Alaska both ecologically and for Alaska Native subsistence and culture. Given the importance of this species and the multitude of potential impacts of opening lands currently under D1 Withdrawals for transfer to other management entities or for leasing and development, we appreciate the attention caribou received in the DEIS. However, there are areas where improvement is needed for clarity and to ensure the best-available scientific information relating to caribou is communicated. Such issues need to be addressed in the FEIS.

Insufficient support from the scientific literature

There are several places in the description of impacts of D1 Withdrawal revocation on caribou where greater support is needed from the scientific literature. For example, the DEIS indicates that seismic surveys displace caribou during winter, causing increased energy expenditures (p.3-243), but no citations are given in support of this statement. Studies from Canada reveal that disturbances from petroleum exploration can lead to flight responses in caribou (Bradshaw et al. 1997, Bradshaw et al. 1998) and that caribou may avoid human infrastructure and disturbance in the winter (Dyer et al. 2002, Johnson and Russell 2014, Plante et al. 2018). Recent work has also noted behavioral changes of caribou in proximity to temporary industrial ice roads (Smith and Johnson 2023, Smith et al. 2023). These studies should be cited in the FEIS, along with additional discussion of the potential consequences of extra expenditure of energy by caribou. For example, reproductive success in caribou is strongly correlated with nutritional stress (Cameron et al. 2005) and late winter body mass of female caribou has been strongly linked to calf production and survival (Cameron et al. 2005, Albon et al. 2017, Veiberg et al. 2017), making extra energy expenditure very important as a potential influence on population growth rate.

Similarly, no citation is given for the claim in the DEIS that effects from oil and gas development would only be localized (p.3-243). Such a statement ignores observations of broader shifts in calving distribution of the Central Arctic Herd that took place after oil and gas infrastructure was constructed, with calving grounds shifting south away from areas of concentrated development (Wolfe. 2000; Cameron et al. 2002; Joly et al. 2006). While this shift is mentioned a few sentences later, these patterns need to be more clearly acknowledged and cited in the FEIS to present a more accurate picture of the potential effects of development on D1 Withdrawals currently unavailable for leasing. It is also important that the FEIS clarifies that impacts on a migratory species in one part of its annual range may have implications for the animal across its range. This is acknowledged elsewhere in the DEIS (e.g., Appendix C, p.22,25) which stands in contrast to an expectation of only local effects. The claim that effects will only be localized must be removed or be supported clearly from the scientific literature in the FEIS.

The DEIS lists a number of potentially adverse impacts of mine development on caribou but only cites two studies (Eftestøl et al. 2019; Boulanger et al. 2021). There are a wide variety of studies that have considered mining impacts on caribou not cited here, including dust effects

from access roads, that should be cited in the FEIS (e.g., Hasselbach et al. 2005; Boulanger et al. 2012; Wilson et al. 2016; Plante et al. 2018; Neitlich et al. 2022).

Another claim made without citation in the DEIS is that “potential for restricted movements would depend on the traffic volume and type of human activity associated with the road” (p.3-243). Similarly, Appendix C states that “impacts from roads are particularly high during times of high ground traffic,” again without citation (App. C, p.25). These statements need to be supported with the scientific literature if they are to be retained as recent studies have found altered caribou behavior even at low traffic volumes (e.g., Severson et al. 2023; Smith and Johnson 2023).

The discussion of cumulative impacts for caribou contains a brief mention that “changes in predators associated with development (including project-related development) or climate change could also influence caribou populations” (p.3-250). This is insufficient consideration of the potential role that changing predator dynamics as a result of development could have on caribou, which again is stated without support from the scientific literature. There is an extensive body of scientific work describing the facilitative effects of linear features on predators. Linear corridors such as roads and seismic lines can alter the distribution of wolves (*Canis lupus*) and caribou (James and Stuart-Smith 2000). Linear features act like highways for wolves, allowing them to travel faster and farther, as well as altering their habitat selection patterns, increasing their contact with and predation of caribou (e.g., Dickie et al. 2017, DeMars and Boutin 2018). Other relevant papers that should be considered/discussed in the FEIS include Latham et al. (2011), Whittington et al. (2011), McKenzie et al. (2012), Hervieux et al. 2013, Serrouya et al. (2017) and Dabros et al. (2018). Wolf predation, facilitated by linear corridors, is thought to be one factor driving recent declines in woodland caribou in Canada (McLoughlin et al. 2003; Hervieux et al. 2013; Hebblewhite 2017). With many caribou herds in Alaska currently in decline, the potential for similar effects of increased predation as a result of D1 Withdrawal revocation, subsequent development, and other reasonably foreseeable development, is important to discuss more fully in the FEIS.

<u>Other issues</u>

The DEIS states that the analysis area for caribou comprises the annual herd ranges of all herds using D1 lands in the decision area (p.3-240). However, review of Table 3.15-1 indicates that the Teshekpuk Caribou Herd (TCH) is not listed among the herds considered in the analysis. This does not align with overlap of TCH migratory use of areas around the Red Dog mining road reported in Wilson et al. (2016) or depictions of TCH winter use in Fullman et al. (2021). The BLM’s North Slope Rapid Ecoregional Assessment provided GIS data indicating seasonal ranges of the four North Slope caribou herds. While BLM no longer appears to host these data online, they are still available through the University of Alaska Anchorage’s Alaska Center for Conservation Science, which led conducting of the North Slope Rapid Ecoregional Assessment (ACCS 2019). Overlay of the winter range polygons from this dataset with the D1 Withdrawal polygons provided with the DEIS also shows overlap. In light of this, the TCH should also be included in the descriptions of potential impacts of revoking D1 Withdrawals and any potential impacts should be considered in the FEIS.

Mapping for caribou in the DEIS consists of a single coarse-scale map of caribou annual ranges (Figure 3.15-1), which is insufficient for adequate evaluation of the effects of the various alternatives on caribou. For example, the DEIS states that "of particular concern to caribou is the potential for development of parcels between the Kokolik and Kukpowruk rivers that could impact Western Arctic herd caribou during their post-calving movements from the calving area to insect relief areas in the Brooks Range" under Alternative D (p.3-247). Discussion of the importance of this area for caribou and the implications of potential development in this region are described (e.g., p.3-244) but not mapped in the DEIS. Maps should be included that show these rivers and other key movement corridors and insect relief areas along with the D1 lands that could be made available under each Alternative. This would present a better picture of the potential impacts under the various alternatives. Similarly, where seasonal range information is available, as is the case for the larger caribou herds in Alaska, it should be depicted on maps that overlay seasonal ranges with D1 Withdrawals and their status under each alternative. This should be done at a meaningful scale that will enable evaluation of the implications of each alternative.

The DEIS describes the potential expansion of the Red Dog Mine as consisting of 13 miles of roads and 16 acres of ground disturbance (p.3-16). For this project and other reasonably foreseeable development, it is important that the FEIS acknowledges that the actual spatial extent of impact on caribou and other species will extend far beyond this physical footprint of development. For example, Plante et al. (2018) reported displacement zones around roads (0-15 km), mining exploration (2-21 km), mines (21-23 km), and human settlements (2-18 km) and Boulanger et al. (2012) reported avoidance around mines (11-14 km). While there is likely to be year to year variation in the degree of disturbance due to development caused by changes in environmental conditions and other factors (Boulanger et al. 2021), the FEIS can nonetheless anticipate much larger footprints of impact than simply the sizes listed in Table 3.1-6. Additional citation and discussion of such factors is warranted.

Dall's sheep

Dall's sheep habitat is located throughout D1 Withdrawals and impacts to Dall's sheep could be substantial under some alternatives absent provision of additional protective mitigation measures. According to Phillips et al. (2010),

> "Dall's sheep in Denali responded negatively to increased traffic volumes by increasing their movement rates when approaching the road and shifting away from the road at higher traffic levels. While many studies have investigated the potential for vehicles to affect sheep behavior and distribution, most have examined individual or group responses to the approach of individual vehicles, or general distribution of sheep relative to road corridors, rather than volume or patterns of traffic… Our results reflected a threshold distance for response to disturbance by showing that sheep within 300 meters (984 ft) of the road shifted farther away at higher traffic volumes and that small increases in the number of vehicles on the road could have impacts on Dall's sheep movements.

> Movement of sheep away from the road corridor at higher traffic volumes may decrease the amount of habitat available for foraging. This may be most relevant to sheep during the spring season, when they most frequently cross the road and “green-up” has not yet occurred at higher elevations” (p.61,64).

The DEIS does not comment on effects to Dall’s sheep, which could be significant under development regimes. Dall’s sheep are only mentioned in passing in three sentences throughout the DEIS (p.3-267, 3-268). These statements do not highlight the gravity of potential effects to Dall’s sheep. The DEIS does not detail the importance of Dall’s sheep in the ecosystem, neither biologically nor as relates to subsistence/hunting dependence. BLM’s subsistence impact analysis under Section 810 of ANILCA should address local community use of Dall’s sheep.

Moose

BLM mapped important moose habitat in the D1 Withdrawals and identified priority areas for moose in several RMPs (Bay, Bering Sea - Western Interior, and East Alaska RMPs). Including these maps, as well as those for the other RMP areas, in the FEIS would strengthen the ability to evaluate potential impacts of D1 Withdrawal revocation on moose and their habitat. In addition, the Reasonably Foreseeable Development Scenario (RFDS) in Appendix D should include overlay maps of moose habitat (including moose calving, wintering grounds, and rutting habitat) with lands most likely to be developed. Doing so would help clarify impacts to moose habitat under the RFDS that are currently vague in the DEIS. It is important to be able to identify where habitat ranges fall in relation to RFDS areas to determine where conflicts could arise. Additionally, Public Land Orders (PLOs) should be visibly marked on the maps to enable the reader to identify areas of priority conservation for moose habitat on D1 Withdrawals.

Wolverines

In November 2023, the U.S. Fish and Wildlife Service designated wolverines in the Contiguous United States as a threatened species, “due primarily to the ongoing and increasing impacts of climate change and associated habitat degradation and fragmentation” (USFWS 2023). Alaskan wolverines are increasingly facing the same challenges. Wolverines are a snow-dependent species that require large expanses of connected habitat.

Maternal wolverine dens are located in areas that retain snow through the spring, and there is no evidence, either currently or historically, that wolverine populations can persist in areas without a sustained spring snowpack (Magoun and Copeland 1998). While the scientific record is sparse on the projected changes to Alaskan wolverine habitat, warming temperatures are expected to shrink the mountain snowpack wolverines rely on for hunting and denning in the Contiguous U.S. Indeed, one study stated,

> "By the late 21st century, dispersal modeling indicates that habitat isolation at or above levels associated with genetic isolation of wolverine populations becomes widespread. Overall, we expect wolverine habitat to persist throughout the species range at least for the first half of the 21st century, but populations will likely become smaller and more isolated" (McKelvey et al. 2011, p.2882).

In light of the climate challenges that face this snow-dependent species, habitat connectivity is more critical now than ever. As islands of habitable alpine and tundra communities begin to melt, wolverines will require passage to pockets of higher elevation snowy areas to find adequate denning habitat with a sustained spring snowpack.

The DEIS does not elaborate on these potential effects to wolverines. The DEIS does briefly state the subsistence importance of wolverines, but reduces the cumulative impacts of the proposed D1 Withdrawal revocation to two sentences:

> "In general, large carnivores (brown bear, wolf, and wolverine) are likely to be among the species most negatively impacted by cumulative impacts because of their need for large ranges and susceptibility to human disturbance and harvest. In addition, the continuing impacts of climate change described in Section 3.15.4.1, Affected Environment, will affect terrestrial mammals" (p.3-271).

The FEIS should include a table (or map layer on the interactive map) for readers to compare the D1 PLOs with regional RMPs to identify and understand what restrictions would apply under the RMPs in terms of development restrictions and wildlife management objectives if D1 Withdrawals are revoked, along with there such restrictions and objectives would occur. These PLO data are available in the "Maps Data" tab on the BLM ePlanning project website, but are not readily accessible for public viewing as they can only be visualized using a GIS platform.

Non-game species

Congress has incentivized the conservation of non-game species at the state level by providing funding for the planning and implementation of State Wildlife Action Plans (SWAPs). Alaska's SWAP has identified "species of greatest conservation need" (SGCN), which include species whose population is small, declining, or under significant threat ("at-risk" species); species that are culturally, ecologically, or economically important; species that function as sentinel species (indicators of environmental change); and stewardship species (species with a very high percentage of their global populations concentrated in Alaska) (ADFG 2015). Of the 326 vertebrate taxa that were identified as SGCN, 71 mammals species were identified (ADFG 2015).

Table 3.15-15 of the DEIS identified 51 species of terrestrial mammals that could be impacted by the project. However, this table does not include 18 species (primarily subspecies) that are identified in ADFG (2015) as SGCN that could reside within the bounds of D1 Withdrawals. The DEIS states that the 51 listed species "have different distributions, preferred habitats, and life

history; therefore, these species will vary in how they are impacted by land status changes within the analysis area" (p.3-266) but sheds no further light on how these species will be affected by the proposed alternatives. It also does not identify which species qualify as SGCN under State guidelines. BLM should consider the habitat value provided by D1 Withdrawals and potential impacts to those SGCN species in making its decision. The DEIS glosses over non-game species entirely, and after Table 3.15-15 provides a single paragraph describing climate effects on only the trapped and hunted species from that list, proposing that subsistence users will likely be affected. The FEIS might also highlight that three of these non-game species—Arctic fox, collared pika, and Alaska marmot—exclusively reside in Alaska or the circumpolar region and so are found in no other U.S. state. Non-game species play critical roles in ecosystem health that are vital to maintaining healthy and productive ecosystems and should be given adequate consideration in the FEIS.

Bats

There are four species of SGCN bats that that occur (or are suspected to occur) in the analysis area: *Myotis lucifugus* (little brown bat), *M. volans*, (long-legged myotis), *M. californicus* (California myotis) and *Lasionycteris noctivagans* (silver-haired bat). The little brown bat is the only bat found in Interior and Southcentral Alaska, while the other three bat species are found in the southeast, although not in numbers that compare to the little brown bat. Habitat for Southeast Alaska bats is unlikely to be impacted, with the exception of the small patches of D1 Withdrawals. Nonetheless, potential effects to those species should be noted in the FEIS.

In 2021, the little brown bat was reclassified as an endangered species by the IUCN (Solari 2021). This was an extraordinary shift from 2008 when it was designated as a species of least concern (Arroyo-Cabrales and Álvarez-Castañeda 2008). Little brown bats across the Contiguous U.S. and parts of Canada are facing sharp declines due to white nose syndrome (WNS). This infectious disease of bats threatens the survival of populations of cavern-hibernating species in North America. Since the first reports of WNS in the U.S. were discovered around 2007, the fungus *Pseudogymnoascus destructans* (the causative agent of WNS) has spread rapidly across North America at a rate of around 500 km per year. Its associated mortality rate of affected bat colonies exceeds 90% (Hoyt et al. 2015). Once common and ubiquitous bat species, like the little brown bat, face predictions of local extirpations and extinctions across the entirety of the Contiguous U.S. There is, therefore, a need to anticipate the future spread of this disease into Alaska and prioritize efforts to conserve the Alaskan stronghold for little brown bats (Meierhofer et al. 2021). This warrants further discussion and consideration in the FEIS.

Birds

The DEIS states that "critical habitat is designated for spectacled eider…and Steller's eider…but these critical habitats are marine habitats and would not be impacted by the project" (p.3-27).

However, Map 23 in the Kobuk-Seward RMP displays habitat for threatened, endangered, and candidate species, including these two eiders (BLM 2008). These habitat designations appear to overlap some D1 Withdrawals, conflicting with the DEIS' claim of no impact. This information should be reassessed to confirm which is inaccurate and the statement be clarified in the FEIS.

Furthermore, the DEIS states,

> "For lands where a 17(d)(1) withdrawal is revoked under Alternative C, the impacts to special status bird species would be the same as Alternative B, but to a greater magnitude and extent because an additional 474,000 acres of 17(d)(1) withdrawals would be revoked in the focused analysis area (Table 3.2-8). Additionally, 17(d)(1) withdrawals would not be retained specifically to avoid conflict with bird habitat as they would for Alternative B (such as avoiding high densities of nesting yellow-billed loons)" (p.3-30).

For ESA candidate species like yellow-billed loons, it would be a best practice policy to err on the side of caution to preserve loon habitat. It is unclear what constitutes a "high density" threshold. This needs to be better defined and quantified in the FEIS so the reader can understand the potential effects to yellow-billed loon nesting habitat. We appreciate the Birds Technical Appendix (Appendix E), which extensively maps the areas of shorebird habitat by region. We recommend BLM create similar maps for Steller's eiders, Kittlitz's murrelets, and Yellow-billed loons, given their status.

Fish and aquatic systems

We are concerned about potential impacts to fish and aquatic systems because of their importance in the food chain, support of critical subsistence uses, and use by apex predators such as brown bears and river otters. Furthermore, watersheds with populations of anadromous fish play a key role of adding marine-derived nutrients into the ecosystem (Rinella et al. 2013). Alternative A, with no revocations, would be the best for retaining intact fisheries and aquatic systems. Alternative B, would be next best because: (1) "….high-value watersheds would be retained specifically to avoid conflict with high-quality aquatic habitat"; and, (2) revocations of "…parcels only where conflicts with natural resources, cultural resources, subsistence resources, recreational resources, or proposed or existing ACECs would be minimized" p. 3-87).

We believe the direct and cumulative impacts analysis of Alternatives C and D to fish and aquatic systems in the DEIS should include more discussion of potentially degraded water quality from increased extractive development such as hard-rock and placer mining, and their supporting transportation corridors. We are concerned that BLM's excellent conclusions from scientific literature about mining water quality impacts cited in the Ambler Road DEIS (BLM 2023) were not included in this analysis. For example, BLM stated "Impacts on water resources quality may include increased dust from mining operations, potential spills, and containment of ore concentrates, chemicals used in processing ore, fuels, and process water, in addition to

wastewater from operations of facilities and camps, and may require treatment of mine water in perpetuity (BLM 2023 p. 3-44); and, “Direct and indirect chemical stressors such as mining related pollution, acid mine drainage, and the release of toxic materials have the potential to impact the health and survival of fish populations and other aquatic species [Limpensel et al. 2017] (BLM 2023 p. 3-105).

The consequences of expanded D1 Withdrawal revocations in Alternatives C and D that may eventually cause increased intensity of mining, and increased potential long-term cumulative and reasonably foreseeable impacts, are not adequately addressed and they should be. We encourage BLM to include a cogent discussion of the known significant and long-term impacts to water quality and contaminant effects on fish and aquatic systems from mining. Many of these impacts from mines, particularly acid rock drainage and heavy metal leaching from tailings and waste rock disposal, are unavoidable and often require perpetual treatment (Limpinsel et al (2018), Woody and O'Neal (2020), and Sergeant et al. 2022). BLM should disclose the established poor water quality track record of large mines in the US (Maest et al. 2006), and specifically in Alaska (Earthworks 2020) because continuation of this track record is likely with expanded mining in the revocation areas.

ANILCA 810 Evaluation

The ANILCA 810 Evaluation in Appendix C contains confusing and inconsistent references to the number of communities affected by revocation. The text indicates that there are 223 rural communities within 50 miles of D1 withdrawals and 139 focused analysis area communities (App. C, p.3). However, Figure C-1 depicts 144 “Subsistence Focused Analysis Area” communities along with 61 “Other Subsistence Analysis” communities. It is unclear how these numbers should be reconciled. Similarly, the evaluation states that 56 of the focused analysis communities have subsistence use areas overlapping lands more likely to be developed under Alternative B (App. C, p.9). However, later it is indicated that 55 communities overlap lands more likely to be developed under Alternative B (App. C, p.20,24), as well as 61 communities (App. C, p.22). It is unclear which is the correct number. These should be corrected as clarity and consistency in the numbers presented are essential to enable reasonable evaluation of potential impacts by the public.

Reasonably Foreseeable Development Scenario

Appendix D provides details on how BLM determined its Reasonably Foreseeable Development Scenario (RFDS). The RFDS underlies BLM’s assumptions of impacts on communities and the environment, making it critical to the conclusions drawn in the DEIS. We have some concerns, however, about the assumptions feeding into the RFDS and whether they are reasonable. For example, the RFDS assumes that areas more likely for mineral development are those within 31

miles of existing road, rail, freshwater barge, and ocean port systems (App. D, p.2). This distance is stated to be the median distance from seven recent resource development projects that would require new access roads. This number seems low, however, both in light of the upper range of the projects described (82 miles for Pebble Mine) as well as other existing infrastructure and proposals. The DeLong Mountain Transportation System road created to access the Red Dog Mine spans approximately 50 miles (Wilson et al. 2016). It was created in the DEIS analysis area in the absence of other nearby access options, showing the willingness of industry to travel farther than the 31 miles assumed in the DEIS. Similarly, BLM has been considering applications for several years for the Ambler Mining Road, designed to access multiple mine sites in the Ambler Mining District which do not currently have other terrestrial or water-based access. The route proposed by the applicant stretches 211 miles. This also is indicative of what industry is willing to construct to access new resources and vastly exceeds the distance assumed by BLM. It is unclear why these roads were not included in the determination of a reasonable access assumption. Given this track record of industry willingness to build longer roads to access new resources, we feel the 31-mile limit used in determining impacts in the RFDS underestimates the true potential for new development across D1 Withdrawals. This needs to be more clearly justified with an explanation of why the observed record of road applications is unreasonable, or a longer distance is needed for the FEIS.

The RFDS also assumes that the areas most likely to be developed for locatable mineral extraction are those occurring within 1 mile of existing State or Federal mining claims (App. D, p.10). It is unclear how this 1-mile threshold was determined as, unlike for access distances, no explanation was given in the DEIS. Confining areas most likely to be developed to areas within 1 mile of existing claims is also questionable since current D1 lands mostly are not available for mineral leasing, resulting in a lack of active mining claims on those lands (e.g., App. D, Figure 21). This does not imply, however, that there would not be interest in developing those areas if they were made available. Indeed, Figure 22 in Appendix D shows that areas with high potential for locatable minerals cross a number of the D1 Withdrawals in the Kobuk-Seward Peninsula planning area. Assuming areas would need to be within 1 mile of existing claims to have a high likelihood of development seems like an unrealistic limitation that has the effect of diminishing expected impacts of D1 Withdrawal revocation. This assumption needs to be more clearly justified or increased (with justification) in the FEIS.

A 2003 report on the cumulative effects of oil and gas activities on the North Slope of Alaska concluded that the effects of oil infrastructure are not limited to the footprint of development (NRC 2003). Caribou are a prime example, exhibiting persistent displacement from developed areas that has spanned decades despite mitigation efforts (e.g., Cameron et al. 2002, Johnson et al. 2020, Prichard et al. 2020). This is also true of mining activities where displacement is observed (e.g., Plante et al. 2018, Boulanger et al. 2021). Similar impacts are also observed in other species and natural processes (NRC 2003). Such indirect influences will increase the extent to which D1 Withdrawals are impacted by infrastructure and should be incorporated into the RFDS. Furthermore, the history of development on the North Slope of Alaska has demonstrated the enduring nature of landscape alteration. Nearly all the roads, pads, pipelines and other infrastructure ever built are still in place (NRC 2003). This enduring legacy of potential development is important to thoughtfully reflect in the RFDS and the FEIS.

Conclusion

In conclusion, we believe that Alternative A, retaining all D1 Withdrawal land status, will offer the best opportunity to maintain habitat connectivity and intactness of terrestrial and aquatic systems, a critical aspect in this world of climate change, food security concerns, and increased demand for natural resources. It will also best provide protections in the public interest for a wide array of species with ecological, economic, and subsistence importance. For these reasons we urge BLM to select Alternative A in the FEIS and Record of Decision.

Thank you for your review and consideration of these comments and requests. We look forward to your response.

On behalf of the Executive Board and membership of the Alaska Chapter of The Wildlife Society,

Cynthia Wardlow

President

Alaska Chapter of The Wildlife Society

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