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NE NPR-A Amendment Planning Team
Bureau of Land Management (930)
Alaska State Office
222 West 7th Avenue
Anchorage, AK 99513-7599

Dear Planning Team:

This letter is in response to the June 2004 draft amendment to the Northeast Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) for the National Petroleum Reserve-Alaska (NPR-A). The Wildlife Society reviewed the IAP/EIS and the Bureau of Land Management's (BLM) recommendation to open additional lands to petroleum leases that are currently closed or under a No Surface Occupancy restriction. The IAP/EIS presents information and compares two alternatives for amending the 1998 Record of Decision (ROD) regarding management of the 4.6 million-acre Northeast Planning Area, and it analyzes a no-action alternative that would maintain the current management strategy authorized by the 1998 ROD.

The Wildlife Society (TWS), founded in 1937, is a non-profit scientific and educational association of professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to enhance the ability of wildlife professionals to conserve diversity, sustain productivity, and ensure responsible use of wildlife resources for the benefit of society.

In scoping comments provided to the BLM on 30 October 2003, The Alaska Chapter of TWS recommended continued protection of the Teshekpuk Lake Surface Protection Area, including 588,998 acres that were deferred from oil and gas leasing and 268,861 acres designated for "no surface activity" in the 1998 Record of Decision. The AK Chapter's recommendation was based primarily on three findings: (1) the wetland complex north and east of Teshekpuk Lake is recognized as the most important goose molting habitat in the circumpolar arctic due to the tens of thousands of geese that occur in the area during late summer; (2) the 45,000 caribou that comprise the Teshekpuk Lake Caribou Herd (TLH) depend on the area for calving and insect relief; and (3) the Chapter was unaware of any new scientific studies that demonstrated that resources, including molting geese and the TLH, would not be negatively affected by oil development.

TWS considered the potential impacts of the proposed action (i.e., the Preferred Alternative B) on wildlife resources in concert with the proposed Performance-based Lease Stipulations and the Required Operating Procedures (ROPs). TWS also reviewed the scientific literature and consulted with research, management and regulatory scientists with recognized expertise in

arctic ecology, including the study of potential impacts associated with oil and gas exploration and development in the arctic.

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Upon review of the IAP/EIS, TWS rejects the BLM's Preferred Alternative (Alternative B) and recommends Alternative A – No Action. Our recommendation is based upon the following:

002 Birds

- The IAP/EIS is inadequate because it grossly underestimates the potential impacts of the petroleum exploration and development to molting geese and the Teshekpuk Lake Caribou Herd.

003 Birds

- The Teshekpuk Lake goose molting area, composed of wetlands north and east of Teshekpuk Lake, supports tens of thousands of Pacific brant, greater white-fronted geese, Canada geese, and lesser snow geese during the flightless molt period. The area is nationally and internationally recognized as the most important goose molting area in the circumpolar arctic.

004 Birds

- The BLM Preferred Alternative (Alternative B) would result in a loss of protection for 35%, 51%, 46%, and 56% of the Pacific brant, greater white-fronted geese, Canada geese and lesser snow geese, respectively, which molt in the Teshekpuk Lake region. Based on the scientific literature, including a review by the National Research Council (2003), this change in land protection status will adversely impact molting geese, particularly brant.

005 Cariobou

- Under the BLM Preferred Alternative (Alternative B), 88% of the Teshekpuk Lake Caribou Herd's concentrated calving area would be made available for oil and gas leasing. It is not possible to reduce or mitigate disturbance of caribou during calving and no evidence suggests this caribou herd can simply move to another calving area. The Preferred Alternative will also reduce protections for caribou insect relief habitat. The resulting change in land protection status will significantly reduce calving success, productivity, and the population of animals available for subsistence.

006 Stips & ROPs

- TWS opposes replacing the 79 existing stipulations with Performance-based Lease Stipulations and Required Operating Procedures (ROPs). Although the IAP/EIS repeatedly states the proposed Performance-based Lease Stipulations and ROPs will protect resources and mitigate adverse impacts associated with oil and gas leasing and development, this statement assumes that: 1) Performance-based Lease Stipulations and ROPs will be implemented and enforced consistently, and 2) they will be effective in achieving mitigation objectives. Because of the subjective nature of the proposed measures, TWS does not believe these two assumptions can be met.

<u>Waterfowl</u>

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It is well documented that the large, oriented thaw lakes in the Teshekpuk Lake Special Area (TLSA) provide molting habitat for Pacific black brant, Canada geese, greater white-fronted geese, and lesser snow geese. These lakes support an average of 14% (~17,500 birds) of the Pacific Flyway population of black brant (King and Hodges 1979, Derksen et al. 1979, King and

Derksen 1979) that migrate from at least 10 nesting colonies in Alaska and Canada and a molting area in Russia (Bollinger and Derksen 1996). Up to 37,000 brant (30% of the Pacific Flyway population) have molted in the TLSA. The TLSA also supports an unknown number of the Western High Arctic (WHA) brant population (Bollinger and Derksen 1996). The WHA brant population has only about 11,000 birds (Reed et al. 1998), and is considered one of the smallest goose populations in North America. The TLSA provides critical molting habitat for up to 35,000 mid-continent white-fronted geese (1999-2003 mean = 23,000). These geese are an important resource to recreational and subsistence hunters; brant are harvested from Arctic Canada to Mexico (Pacific Flyway Council 2002), and greater white-fronted geese are harvested from Interior Alaska to Texas and Mexico (Central, Mississippi, and Pacific Flyway Councils 1998).

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Flightless geese feed along moss/peat shorelines immediately adjacent to open water (Derksen et al. 1982, Weller et al. 1994). These narrow moss flats provide specific plant foods for geese that spend up to 50% of their time in foraging (Derksen et al. 1982). Importantly, the availability of these foraging flats along shorelines of thaw lakes is very limited—only about 2% (about 800 ha) of all habitats classified in the Teshekpuk Lake molting area (over 400,000 ha) consisted of this land cover class (Markon and Derksen 1994). Other features that make the Teshekpuk Lake area significant for molting geese include the limited number of predators (Derksen et al. 1979), absence of anthropogenic disturbances, and large, actively changing basins (Weller and Derksen 1979) where flightless birds seek protection in water or on ice floes (Weller et al. 1994). Clearly, this molting area is unique and of international significance for North American and Russian populations of geese that are important to the nations of the United States, Canada, Mexico, and Russia. The material presented in the IAP/EIS (Affected Environment) is incomplete and should be updated and expanded to include this information.

The IAP/EIS does not accurately portray the potential impacts of the Preferred Alternative (Alternative B) to molting geese in the TLSA. It is well documented that molting geese are sensitive to anthropogenic disturbances (Derksen et al. 1979), especially aircraft overflights (Jensen 1990, Miller et al. 1994) that would be likely if industrialization of the Teshekpuk Lake area were to occur. Running, swimming, and other behavioral responses to disturbance events increase stress to molting geese (Jensen 1990, Taylor 1995). Reductions in feeding time or excessive energy expenditures may compromise fitness and survival or reproductive success (Taylor 1993).

Most significantly, the IAP/EIS does not recognize that the boundaries identified for areas open to leasing under the Preferred Alternative (Alternative B) will expose large numbers of molting geese to industrial activity. Based on analysis of a 25-year U.S. Fish and Wildlife Service data set on molting geese and distribution (Mallek 2003), Alternative B would protect an average of only 56% of the brant (range = 41-70%), 49% of greater white-fronted geese (range = 27-74%), 51% of Canada geese (range = 30-67%), and 44% of lesser snow geese (range = 7-97%) when lakes that are intersected by the boundaries of the proposed lease area are grouped with those lakes wholly in the lease area (Martin 2004). Compared to current protection mandated by the 1998 Record of Decision, adoption of Alternative B would result in reductions of 35% (brant), 51% (greater white-fronted geese), 46% (Canada geese), and 56% (lesser snow geese) in the average proportion of molting goose populations protected from impacts of oil and gas

development. This is an unacceptable risk given what we know about response of molting geese to human disturbance.

The 3-mile (~ 400 m) setback for development near goose molting lakes (Lease Stipulation K-4) is inadequate as geese may feed up to several hundred meters from lakes (Derksen et al. 1982). Vehicle disturbance can displace geese within 500 m of roads and compressor noise may prevent geese from feeding within 800 m of production facilities (Madsen 1985, Wisely 1974). The minimum setback should be at least 1 mile from lakes used by molting geese and no development activity should occur in lakes used by molting geese.

Shorebirds

At least 17 species of shorebirds breed regularly on the NPR-A (Andres 2004) and this diverse group includes the most abundant and widespread bird species on the Arctic Coastal Plain. Shorebirds are vulnerable to the impacts noted in the IAP/EIS, including: displacement from habitats converted to gravel fill, collisions with structures such as buildings and power lines, and potentially lowered reproductive success due to locally elevated predator populations. Increased predation, if it occurs, has the potential for the most profound effect because the spatial scale of impact would reach far beyond the development footprint. Habitat loss is also of concern, and the IAP/EIS understates the potential effect on shorebirds by presenting it as a mixed blessing for birds ("good" for some species, not for others). Most shorebirds (with the exception of red-necked phalaropes) occur in lower than expected densities adjacent to oil field roads (Troy 1993, 2000), and all shorebird species are displaced from nesting areas adjacent to oil field facilities when those areas remain snow-drifted or are covered with impounded water during the nest initiation period.

Additional leasing will increase impacts to shorebird populations, presuming it results in development of new oil fields. Shorebird breeding densities in NPR-A tend to increase with increased latitude (Andres 2004) and migration staging is heaviest at coastal locations, so development within the Teshekpuk Lake Surface Protection Area will have disproportionately greater effect than development inland. Concerns are greatest for those species that are declining and are found in greater than average abundance in the TLSA, including dunlin, red phalarope, and ruddy turnstone (Andres 2004).

The IAP/EIS fails to adequately evaluate impacts of oil development on species that are of conservation concern, inhabit rare habitats, or species that are sensitive to disturbance. Of the approximate 17 breeding shorebird species on the NPR-A (Andres 2004), seven are on the U.S. Fish and Wildlife Service's Birds of Conservation Concern (BCC) list, including dunlin, American golden-plover, whimbrel, bar-tailed godwit, ruddy turnstone, buff-breasted sandpiper and stilt sandpiper. These species have been identified based on several factors, including population trends, threats, distribution, abundance, and area importance. The goal of creating the BCC list is to prevent or remove the need for additional Endangered Species Act bird listings by implementing proactive management and conservation actions. The practice of locating oilfield roads and facilities in areas of higher elevation might also adversely affect species that rely on this rare habitat type. Higher elevated dry sites occur in much less frequency than the better protected wetlands that occur commonly throughout much of NE NPR-A.

The IAP/EIS does not consider that populations of common shorebird species that breed on the NPR-A, including dunlin, red phalarope and ruddy turnstone, are declining. Reasons for the declines are unknown and difficult to determine because they may occur at many points throughout the life cycle of the birds. The omission of this information leads to an inaccurate assessment of the possible effects of oil and gas activities to shorebird populations using the NPR-A.

Raptors

Cliffs along the Colville River and several of its tributaries have long been recognized as nesting habitat for unique concentrations of several raptor species, including arctic peregrine falcons, rough-legged hawks, and gyrfalcons (Kessel and Cade 1958, Cade 1960, White and Cade 1971). The density, diversity, and extent of these breeding raptor populations make the Colville River of international importance, warranting extremely judicious management. Indeed, the National Petroleum Reserves Production Act (NPRPA) requires that activities in the Colville River Special Area "…shall be conducted in a manner which will assure the maximum protection of such surface resources to the extent consistent with the requirement of the Act for the exploration of the Reserve." However, the IAP/EIS does not provide a mechanism for meeting this obligation.

First, several significant threats caused directly or indirectly by petroleum exploration and development in the region are not evaluated in the document. Examples include the disturbance of nesting raptors caused by exploratory geologists collecting samples from nesting cliffs, electrocution of raptors perching on power poles, and increased disturbance of nesting raptors resulting from extending the road network into the NPR-A to facilitate development. These threats should have been evaluated, and the prospect for increased development under the Preferred Alternative (Alternative B) to escalate their scale should have been addressed. Second, the Performance-based Lease Stipulations and ROPs for raptors fall short of providing the "maximum protection" required by the NPRPA. None address the disturbance of nesting raptors by exploratory geologists or recreational users, and none require use of specific technology to ameliorate the risk of raptor electrocution (see US BLM 1982, Olendorff et al. 1989, Bevanger 1994, APLIC 1996, Lehman 2001). Finally, the Performance-based Lease Stipulations and ROPs, although admirable for their attempt to protect raptor nesting and foraging habitat, are so subjective that they are impossible to evaluate, monitor or enforce. For example, locating facilities as far "as feasible" from nests and minimizing impacts to habitat unless "there is no feasible or prudent alternative" will mean different things to those trying to maximize protection of raptors and those trying to maximize extraction of petroleum. These are serious shortcomings of the impact evaluation and proposed mitigation measures that must be addressed to adequately examine the potential impacts of the Preferred Alternative (Alternative B).

Caribou

The Teshekpuk Lake Caribou Herd (TLH) generally remains on the Arctic Coastal Plain year-round and migrates long distances to winter ranges only infrequently. In May, most of the herd converges on the Teshekpuk Lake area; the annual calving ground is centered south, east and

northeast of the lake. Caribou seek calving grounds with few predators, low levels of disturbance, and abundant, high-quality forage. Oil development moving west of the Colville River Delta is now beginning to encroach on important calving grounds of the TLH.

Following calving in June, most caribou from this herd seek relief from insects on unvegetated or elevated sites within a few miles of the Beaufort Sea coast, primarily between Dease Inlet and the mouth of the Kogru River. The most important insect relief habitat is located north and east of Teshekpuk Lake. The herd disperses widely starting in August with movements influenced by forage quality and quantity and by weather.

Caribou from this herd show high fidelity to the calving area. Surveys have indicated that caribou that calve within the currently protected areas (i.e., as identified in 1998 ROD) have much higher calving success than caribou found outside the areas during calving (Carroll 2003).

TLH calving surveys have indicated that when natural conditions prevented caribou from reaching the calving area, calving success was greatly reduced. In 2001, heavy snow and a late snow melt-off slowed the migration; only 44% of collared cows calved successfully, compared to 70% for other years. Calving success for collared cows in the calving area in 2001 was higher (88%) than cows that calved outside the calving area (10%; Carroll 2003).

The BLM Preferred Alternative (Alternative B) reduces the Teshekpuk Lake Surface Protection Area by 75% as only 213,000 acres north and northeast of Teshekpuk Lake would be restricted from leasing. Based on the 1998 Record of Decision, approximately 74% of the concentrated calving area is currently protected from oil and gas leasing or surface activity. The BLM Preferred Alternative (Alternative B) would allow oil and gas leasing on 88% of the TLH concentrated calving area.

The IAP/EIS grossly understates the potential impact of the BLM Preferred Alternative (Alternative B) on the TLH. The IAP/EIS implies that there will be only incremental increases in disturbance, primarily affecting individual animals: "…it is likely that few or no populations would be measurably affected" (IAP/EIS Executive Summary:4). Given that 88% of the TLH concentrated calving area would be made available for leasing and development, this statement is unjustified. Although the IAP/EIS suggests that potential impacts to calving caribou will be minimized as the result of Performance-based Lease Stipulations, currently there is no known way to reduce disturbance of caribou during calving, other than a complete cessation of all development activity in the calving area during the calving period. The only study that has attempted to assess the effectiveness of limiting traffic found there was no reduction in disturbance as a result of traffic restrictions (Lawhead et al. 2004). Furthermore, there is no reason to believe that the TLH can simply move to another calving area, as did the Central Arctic Herd (CAH) because no other similar habitat is available to the TLH. It is reasonable to assume that any development activity within the calving ground will result in a significant reduction of calving success by the herd.

Most of the North Slope subsistence harvest of caribou is from the TLH. The subsistence harvest rate (6%; Carroll 2003) for the TLH is considerably higher than the subsistence harvest rate for the CAH (2%). Given that the Preferred Alternative (Alternative B) would result in 88%

of the TLH concentrated calving area being made available for oil and gas leasing, the almost certain adverse effect on calving success, in conjunction with the relatively high rate of harvest, could result in a population decline. Any negative effect on the TLH population would have a negative effect on North Slope subsistence hunters.

Potential detrimental impacts to caribou from petroleum development have been questioned as some caribou still use habitats within the Prudhoe Bay and Kuparuk oil fields, particularly during the post-calving period (Cronin et al. 2000). However, other studies have documented cumulative effects on caribou and have extrapolated potential long-term adverse changes in nutrition and reproduction (see Wolfe et al. 2000, Griffith et al. 2002, Cameron et al. 2002, NRC 2003).

Development-related effects on the portion of the CAH occurring within the oil fields were observed during 1980-2000, despite masking effects of relatively low caribou densities and highly favorable weather on the calving grounds (Wolfe 2000, Cameron et al. 2002, Griffith et al. 2002). Effects included shifting of concentrated calving from the Kuparuk oil field to the southwest of the field and delayed and deflected movement to and from coastal insect-relief areas (Whitten and Cameron 1983; Dau and Cameron 1986; Cameron et al. 1992; Nelleman and Cameron 1996, 1998; Murphy and Lawhead 2000; Wolfe 2000).

Although oil field development has had negative effects on the CAH, favorable environmental conditions, a relatively low harvest rate, a low density of animals on the calving and post-calving grounds, and available calving area outside the oil fields on the broad coastal plain may have mitigated population-level impacts to date. Griffith et al. (2002) predicted significant population-level impacts to the Porcupine Caribou Herd if industrial development occurred on the concentrated calving ground. The TLH may incur a similar decline if development occurs within their concentrated calving area or oil field infrastructure affects seasonal movements of the herd, particularly during the insect season.

Some caribou appear to habituate to the presence of structures in oil fields (Ballard et al. 2000); however, Nelleman and Cameron (1998) reported that caribou did not habituate to human presence and vehicular traffic. CAH caribou avoided areas within 2.5 mi (4 km) of roads and pipelines, functionally increasing habitat loss from 2% (the immediate footprint of roads and gravel pads) to 29% (Wolfe 2000).

Dau and Cameron (1986) found that maternal caribou avoided roads during calving even when traffic levels were low, but non-maternal caribou did not. In the CAH range, where oil development has occurred on a portion of the calving grounds, cows in the late stage of pregnancy and with newborn calves avoided and shifted concentrated calving away from developed areas, including prime calving and foraging habitat (Whitten and Cameron 1983; Dau and Cameron 1986; Cameron et al. 1992; Nelleman and Cameron 1996, 1998; Murphy and Lawhead 2000; Wolfe 2000).

Alternatives B and C would allow oil and gas leasing and development in the narrow corridor of land east of Teshekpuk Lake. Most parturient TLH cows must migrate through this corridor shortly before or after calving to gain access to insect relief areas north of Teshekpuk Lake

(Prichard et al. 2001). Because cows in the late stage of pregnancy or with newborn calves are most sensitive to disturbance, and dry land used for migration corridors is limited within this corridor, development in this portion of the calving area would adversely affect migration and calf survival.

Displacement from calving grounds can result in overcrowding and competition on suboptimal habitat. Decreased forage availability and lower nutrient intake can reduce reproductive rates (Cameron 1995, Nelleman and Cameron 1998). Caribou cows within oil fields gained less weight and exhibited lower calving and calf survival rates than cows outside oil fields (Cameron 1995). Displacement from prime calving grounds may also increase predation (Whitten et al. 1992, Nelleman and Cameron 1998, Griffith et al. 2002, Young et al. 2002).

In summary, the BLM Preferred Alternative (Alternative B) results in an unacceptable risk to the TLH. The alternative will likely displace the TLH from calving grounds and interrupt their movements during the critical insect season. Significant displacement and disturbance during calving and insect seasons will likely result in declining herd productivity and a declining population. A substantial decline in the TLH will have a negative effect to North Slope subsistence hunters.

Stipulations and Required Operating Procedures

The IAP/EIS proposes a set of Performance-based Lease Stipulations and Required Operating Procedures (ROPs) under Alternatives B and C, which if adopted, would replace the stipulations currently in effect. The proposed measures differ from the current stipulations, in that they state a desired management objective, but lack specificity in prescribing the means by which the objective is to be met. The IAP/EIS (Page 2-11) states that the rationale for this approach lies in providing "…BLM and other users, including industry, greater adaptability in protecting surface resources." TWS recognizes the value in providing industry with flexibility in meeting a variety of management objectives; however, as this concept is applied in the IAP/EIS, flexibility comes at the cost of lower standards of protection for wildlife resources.

The proposed stipulations typically instruct lessees to "protect" or "minimize disturbance" to wildlife. While this objective is laudable, the wording is open to interpretation and provides little assurance of benefit to wildlife. It is inevitable that the objective of minimizing impacts to wildlife will conflict to some extent with the implicit objective of facilitating oil and gas development, and in many cases, the proposed stipulations and ROPs provide little or no guidance as to how that conflict will be resolved. For example, while the 1998 stipulation (#53) called for a suspension of helicopter overflights in the goose molting area, the proposed stipulation (K-4.h) states that, "Nonessential helicopter overflights by oil and gas lessees and all other users shall be reviewed and may be suspended…". The proposed substitute stipulation is ineffective because: (1) it is unlikely that any helicopter use would be considered "non-essential" by industry; (2) standards for "review" are not stated; and (3) regardless of the outcome of the review, there is no assurance that overflights will actually be suspended. Similar deficiencies compromise protections for all important wildlife resources.

Although TWS recognizes the benefits of maintaining flexibility and adaptability in management, the proposed measures are unworkable. The expectations are unclear to the public, industry, and managers. The objectives and associated requirements/standards are so vague as to make monitoring compliance, and measuring success, impossible. The principles of adaptive management cannot be applied under these circumstances. Further, the current 79 stipulations were developed for the 1998 IAP/EIS through a deliberative, multi-agency process, and discarding them in favor of substitutes developed unilaterally without the benefit of consultation with wildlife scientists outside the BLM is unwise. TWS opposes the proposed change in approach to protecting wildlife and habitat resources.

Summary

In the Federal Register (23 June 2003), the BLM invited scoping comments on a revised oil and gas leasing plan for NE NPR-A stating:

> "BLM has conducted various scientific studies on the biological resources of the area in cooperation with the North Slope Borough, the State of Alaska and other federal agencies. Information gained since the completion of the NE plan has led BLM to conclude that it is appropriate to consider amending it."

TWS is unaware of any new scientific information, methods, techniques, or management recommendations nor any new technology in oil and gas exploration, development or production since the 1998 Record of Decision that will offset expected adverse effects of the Preferred Alternative (Alternative B) to molting geese, the Teshekpuk Lake Caribou Herd, and other wildlife resources. If TWS has overlooked such specific studies, please provide a list of references.

Thank you for considering the views of wildlife professionals. TWS appreciates the opportunity to comment on the draft Northeast Integrated Activity Plan/Environmental Impact Statement for the National Petroleum Reserve-Alaska. TWS recommends the BLM adopt Alternative A - the No Action Alternative. Of the three alternatives considered in the IAP/EIS, the No Action Alternative provides the greatest protection to molting geese, breeding and staging migratory birds, and the Teshekpuk Lake Caribou Herd. The BLM Preferred Alternative (Alternative B) and Alternative C would result in unacceptable impacts to wildlife resources.

Sincerely,

Thomas M. Franklin
Executive Director (Acting)

cc: The Honorable Gail Norton, Secretary of the Interior
Kathleen Clarke, Director, Bureau of Land Management
Steve Williams, Director, Fish and Wildlife Service

Pete Domenici, Chair, Senate Energy and Natural Resources Committee
Richard Pombo, Chair, House Resources Committee

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