

Mr. Henri Bisson
Bureau of Land Management
Alaska State Office
222 West 7th Avenue
Anchorage, Alaska 99513-7599

August, 23, 2004

Subject: Comments on the Northeast NPR-A Planning Area, Integrated Activity Plan/Environmental Impact Study

Dear Mr. Bisson:

Thank you for inviting The Nature Conservancy to comment on the *Northeast NPR-A Planning Area, Integrated Activity Plan/Environmental Impact Study*. Our comments are based on the results of a comprehensive ecological assessment of the Alaska-Yukon Arctic ecoregion. We are not recommending an alternative, however our comments point to substantial evidence that protection of important species and habitat within the area of Teshekpuk Lake is of paramount importance.

The intent of the Conservancy's two and a half year study of the Arctic is to identify the lands and waters most necessary to sustain the ecoregion's biodiversity. In the first part of the assessment, we collected and catalogued information about conservation targets—the species, natural communities and ecological systems representative of the biodiversity of the ecoregion. Extensive biological data on these targets were compiled in a spatial database for use in mapping and analysis. We also developed several analytical tools, including predictive ecosystem models, a relative biodiversity index and a decision support tool. A full project description and the products of the assessment to date have been provided to BLM and are available online at nature.org/alaska.

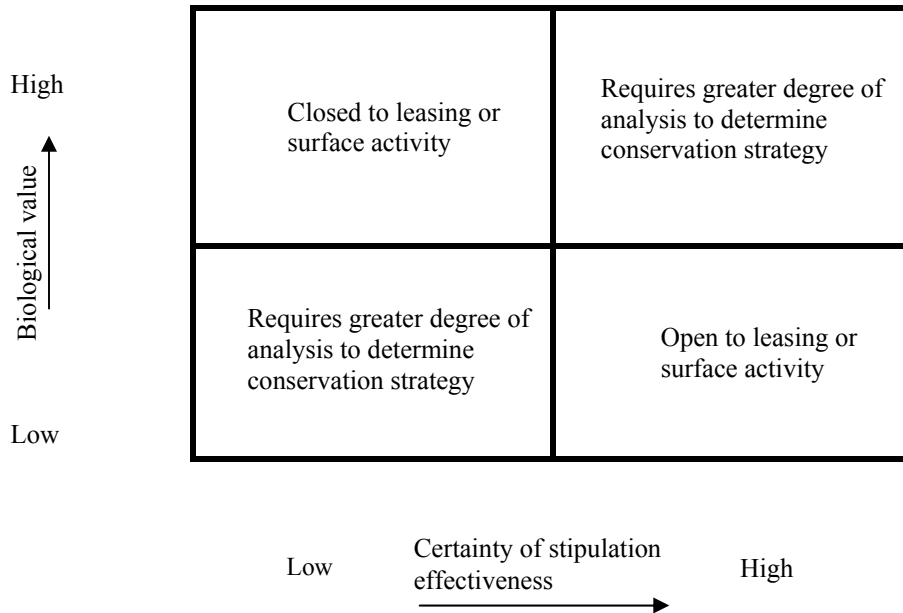
The Conservancy is now in the second phase of the assessment—working with partners and stakeholders to develop a conservation blueprint for the ecoregion. The blueprint will be a shared vision of key habitats in the region with strategies to conserve these habitats. As a first case study in the application of the assessment tools and data, the Conservancy chose to explore the relative biodiversity significance of Teshekpuk Lake. The Teshekpuk Lake area is in the northeast section of NPR-A and is included in the planning area currently under review by BLM. The area has long been recognized as important habitat for caribou, shorebirds, black brant, spectacled eider, and other waterfowl.

Our analysis of the Teshekpuk Lake area, defined using the boundaries of BLM's current surface protection area, confirms that this area is significant to biodiversity in the ecoregion. We have attached our report for your review, and draw your attention to the following key findings:

- The Teshekpuk Lake area supports significant biodiversity value compared to the rest of the Alaska-Yukon Arctic ecoregion. Of 82 Teshekpuk Lake area planning units, 99% score in the 80th percentile in a relative biodiversity measure for the whole ecoregion. Higher scores indicate areas where there is either a greater diversity of species or a greater concentration of an individual species.
- Teshekpuk Lake area supports significant biodiversity value within the Beaufort Coastal Plain subregion. When compared only to the rest of the plain, 72% of the planning units score above the 70th percentile in a relative biodiversity measure.
- The northern, eastern, and southeastern portions of the Teshekpuk Lake area are particularly high on the relative biodiversity index
- Three species targets (separated into five life-stage targets) are very heavily represented; over 50% of their total distribution in the ecoregion occurs in the Teshekpuk Lake area. These include geese molting concentrations (100%), Teshekpuk Lake caribou mosquito relief area (100%), Teshekpuk Lake caribou calving area (53%), Teshekpuk Lake caribou oestrid fly relief area (48%) and black brant nesting colonies (46%).

Clearly, Teshekpuk Lake has great significance to biodiversity, and requires careful management to ensure the long-term vitality of its fish and wildlife. One of the issues in the EIS is whether or not certain areas around Teshekpuk Lake should be closed to oil and gas leasing and/or surface activity. Closures as a conservation tool offer the least risk to biodiversity and provide protection to the largest number of species within a given area. There are, however, multiple tools available, including stipulations, required operating procedures, self-regulation, and biological monitoring that provide varying degrees of conservation for important species and habitats. Due to the significance of this area to several species, it is incumbent on the BLM to prove that mechanisms for mitigating development impacts, such as stipulations, can ensure adequate protection of the important species and habitats.

The type of conservation tool chosen should depend strongly on the level of biodiversity value and the certainty that the conservation tool will conserve that value. As illustration, the following diagram depicts how one might assess the need for closure versus stipulations. If biodiversity value is very high, but certainty of the effectiveness of stipulations is low, then this is an area where closures are necessary. If on the other hand, biodiversity is low and the certainty of effectiveness is high, then this is an area where stipulations or operating procedures alone may be enough to conserve biodiversity. In the remaining two categories—high biodiversity/high certainty and low biodiversity/low certainty—careful analysis of conservation strategies and risk is warranted and a combination of tools may be necessary.



For the sake of this EIS comment, the Conservancy extended its analysis of the Teshekpuk Lake area to consider where the risks to biodiversity had the potential to increase if the current surface protection area (Alternative A) was modified to Alternative B or C.

The current surface protection area contains a large percentage of the habitats important for geese (including black brant), ducks, Sabine’s gull, and the Teshekpuk Lake caribou herd (see table below). In addition, 100% of the goose molting concentration areas and mosquito relief areas for the caribou herd within the ecoregion fall within the current surface protection area.

The current closures to leasing or surface activity, however, do not apply to large amounts of the breeding density areas for several waterfowl species, shorebirds, and Sabine’s gull, or the places where the Teshekpuk Lake caribou concentrate for calving, summering, or wintering (please see table below). For example, only 53% of the calving area is represented in areas currently closed to leasing and/or surface activity.

Alternative B would reduce by nearly 75% the existing Teshekpuk Lake area closures. The table below shows the percentages of distribution among targets that are heavily represented in the Teshekpuk Lake area when the different protection boundaries under alternatives A and B are considered. For example, almost one half (46%) of the brant nesting colonies across the ecoregion are found in the current surface protection area. Alternative B applies closure to only 10% of the ecoregional distribution. Alternative C eliminates all closures in the Teshekpuk Lake area, and so, if it were without effective stipulations, has the potential to impact over half of the brant nesting colonies in the ecoregion.

The shaded areas in the table below highlight the five life-stage targets which represent biodiversity values most at risk from a change in the current surface protection area: Teshekpuk Lake caribou calving, mosquito relief, and fly relief areas, geese molting concentration areas, and black brant nesting colonies.

Target Species	Life Stage Target	Percentage of Ecoregional Distribution	
		Alt A Closed Areas	Alt B Closed Areas
Geese (black brant, Canada, white-fronted, and snow geese)	<i>molting concentrations</i>	100%	63%
	<i>nesting concentrations</i>	20%	6%
Teshekpuk Lake caribou	<i>mosquito relief area</i>	100%	67%
	<i>calving area</i>	53%	4%
	<i>oestrid fly relief area</i>	48%	22%
	<i>summer area</i>	17%	5%
	<i>wintering area</i>	3%	0%
black brant	<i>nesting colonies</i>	46%	10%
	<i>breeding density</i>	7%	4%
sabine's gull	<i>colonies</i>	45%	45%
	<i>breeding density</i>	6%	3%
ducks	<i>molting concentrations</i>	43%	31%
	<i>nesting concentrations</i>	12%	4%
spectacled eider	<i>breeding density</i>	8%	4%
yellow billed loon	<i>breeding density</i>	4%	1%
shorebirds	<i>breeding density</i>	5%	2%
white fronted goose	<i>breeding density</i>	6%	3%
long-tailed duck	<i>breeding density</i>	4%	2%
Total = 10	Total = 18		

Similar to some species, a number of terrestrial ecosystems defined for the assessment occur only on the Beaufort Coastal Plain.¹ Four of these ecosystems (coastal wet sedge tundra, lowland lake, coastal barrens, and coastal grass and dwarf shrub tundra) are significantly represented inside the current surface protection area but outside the area proposed closed to leasing in Alternative B (see table on following page). These four ecosystems are also greatly underrepresented in the conservation network in the ecoregion; only 4% or less of each system's ecoregional distribution in the coastal plain is located on lands managed for conservation.²

In summary, reduction of areas closed to surface activity may pose greatest risk for molting concentration areas for black brant and other geese, nesting colonies of black brant, and seasonal use areas of the caribou herd. Alternative C would allow activity in all of the places used by geese for molting and by the caribou herd to seek relief from mosquitoes and nearly half (46%) the colonies where black brant are known to nest. Clearly, absent other sound mitigation and management measures, Alternative A poses the least risk to the biodiversity of the Alaska-Yukon Arctic ecoregion and the Beaufort Coastal Plain, and Alternative C poses the greatest.

¹ See Update #2: Predictive Terrestrial Ecosystem Model .

² See Update #3: Gap Analysis of Terrestrial Ecosystems for more information about the classification of lands managed for conservation and the conservation status of terrestrial ecosystems in the Alaska-Yukon Arctic ecoregion.

Target Systems	Percentage of Ecoregional Distribution	
	Alt A Closed Areas	Alt B Closed Areas
coastal wet sedge tundra	18%	7%
lowland lake	12%	2%
coastal barrens	22%	13%
coastal grass and dwarf shrub tundra	19%	8%
lowland wet sedge tundra	4%	1%
riverine wet sedge tundra	1%	0%
Total = 6 terrestrial systems		

The Conservancy has not analyzed the BLM’s proposed performance-based stipulations and required operating procedures for their adequacy in ensuring the compatibility of development with adequate protection of these valuable natural resources. Many of the stipulations are designed to mitigate impacts on habitats for certain species during different seasons. It is conceivable, however, that some areas may require closure to development where stipulations fall short of necessary resource protection. Furthermore, in all cases, the BLM can grant exceptions to stipulations if the lessee/permittee can demonstrate to the Authorized Officer’s satisfaction that the existing stipulation is technically not feasible, is economically prohibitive, or that an alternative is available that fully satisfies the objectives of the existing stipulation. The resulting lack of certainty of protection increases the risk that we could lose very significant portions of our biodiversity resources.

The Conservancy believes that we should strive to balance our economic and environmental needs; in doing so, a well-balanced management plan often includes the full range of conservation tools from closures to stipulations, depending on the specific place and species. The Conservancy also recognizes that the warming climate that is being experienced in the Alaskan Arctic will have pronounced effects on the dynamics of ecosystem relationships in the Teshekpuk Lake area and must be a necessary focus of continuing assessment of the adequacy of any conservation strategies employed. Similarly, conservation of the unique biodiversity of the Teshekpuk Lake area will also require assessment of the impacts of development activities in the broader region of the north east section of NPR-A. The Conservancy welcomes the opportunity to work with stakeholders in the region to identify the conservation strategies that are best suited for Teshekpuk Lake’s unique and special areas.

Sincerely,

David Banks
State Director

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