

# Appendix D: ANILCA Section 810 Analysis of Subsistence Impacts

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## **Appendix D: ANILCA Section 810 Analysis of Subsistence Impacts**

On January 30, 2004, the Bureau of Land Management (BLM) issued a Notice of Intent in the Federal Register to prepare a Resource Management Plan (RMP) and associated Environmental Impact Statement (EIS) for public lands administered by the Fairbanks District Office. As defined by the Federal Land Policy and Management Act of 1976 (FLPMA), as amended, “public lands” are those federally-owned lands and interests in lands (such as federally-owned mineral estate) that are administered by the Secretary of the Interior through the BLM. In this case, public lands also include lands selected, but not yet conveyed, to the State of Alaska and Native corporations and villages.

Current management of these lands is guided by the Northwest Management Framework Plan (MFP) (BLM 1982). Since approval of the MFP in 1982, new regulations and policies have created additional considerations that affect the management of public lands. In addition, new issues and concerns have arisen over the past 20 years. Consequently, some of the decisions in the MFP are no longer valid or have been superseded by requirements that did not exist when the MFP was prepared. Through the completion of an RMP/EIS, the BLM proposes to provide a comprehensive land use plan that will guide management of the public lands and interests administered by the Fairbanks District Office and the Anchorage Field Office.

Chapter III: Affected Environment and Chapter IV: Environmental Consequences of the Kobuk-Seward Peninsula Resource Management Plan provide a detailed description of both the affected environment of the Planning area and the potential adverse effects of the various alternatives to subsistence. This appendix uses the detailed information presented in the Amended IAP/EIS to evaluate the potential impacts to subsistence pursuant to Section 810(a) of the Alaska National Interest Land Conservation Act (ANILCA).

### **A. Subsistence Evaluation Factors**

Section 810(a) of the ANILCA requires that an evaluation of subsistence uses and needs be completed for any federal determination to “withdraw, reserve, lease, or otherwise permit the use, occupancy or disposition of public lands.” As such, an evaluation of potential impacts to subsistence under the ANILCA Sec. 810(a) must be completed for the Amended IAP/EIS. The ANILCA requires that this evaluation include findings on three specific issues:

- The effect of use, occupancy, or disposition on subsistence uses and needs;
- The availability of other lands for the purpose sought to be achieved; and
- Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes (16 USC Sec. 3120).

The evaluation and findings required by the ANILCA Sec. 810 are set out for each of the four alternatives considered in the Resource Management Plan.

A finding that the proposed action may significantly restrict subsistence uses imposes additional requirements, including provisions for notices to the State of Alaska and appropriate regional and local subsistence committees, a hearing in the vicinity of the area involved, and the making of the following determinations, as required by Section 810(a)(3):

- Such a significant restriction of subsistence uses is necessary, and consistent with sound management principles for the utilization of the public lands;
- The proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of use, occupancy, or other disposition; and
- Reasonable steps will be taken to minimize adverse effects upon subsistence uses and resources resulting from such actions.

To determine if a significant restriction of subsistence uses and needs may result from any one of the alternatives discussed in the Resource Management Plan, including their cumulative effects, the following three factors in particular are considered:

- The reduction in the availability of subsistence resources caused by a decline in the population or amount of harvestable resources;
- Reductions in the availability of resources used for subsistence purposes caused by alteration of their normal locations and distribution patterns; and
- Limitations on access to subsistence resources, including from increased competition for the resources.

A significant restriction to subsistence may occur in at least two instances: 1) when an action substantially reduces populations or their availability to subsistence users, and 2) when an action substantially limits access by subsistence users to resources. Chapter III: Affected Environment of the Resource Management Plan provides information on areas and resources important for subsistence use, and the degree of dependence of affected villages on different subsistence populations. Chapter IV: Environmental Consequences provides much of the data on levels of reductions and limitations under each alternative, which was used to determine whether the action would cause a significant restriction to subsistence. The information contained in the Resource Management Plan is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA Sec. 810 must also include a Cumulative Impacts analysis. The following section begins with evaluations and findings for each of the four alternatives discussed in the Resource Management Plan. Finally, the cumulative case, as discussed in Chapter IV: Environmental Consequences of the Resource Management Plan, is evaluated. This approach helps the reader to separate the subsistence restrictions that would potentially be caused by activities proposed under the four alternatives from those that would potentially be caused by past, present, and future activities that could occur, or have already occurred, in the surrounding area.

When analyzing the effects of the four alternatives, particular attention is paid to those communities who have the potential to be most directly impacted by the proposed actions. These communities are located within or adjacent to the Kobuk-Seward Peninsula planning area. The cumulative case expands the analysis to include lands outside, but near the planning area, including indirect effects to communities located in other areas of the state, to assess any impacts to subsistence that may result because of negative effects to migratory subsistence species.

In addition to ANILCA, Environmental Justice, as defined in Executive Order 12898, also calls for an analysis of the effects of federal actions on minority populations with regard to subsistence. Specifically, Environmental Justice is:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Section 4-4 of Executive Order 12898, regarding the Subsistence Consumption of Fish and Wildlife, requires federal agencies to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence, and to communicate to the public any risks associated with the consumption patterns from activities that they are proposing. To this end, the description of subsistence use as presented in Chapter III: Existing Environment, as well as the subsistence analyses of the alternatives located in Chapter IV: Environmental Consequences of the Resource Management Plan, have been reviewed and found to comply with Environmental Justice requirements.

## **B. ANILCA Sec. 810(a) Evaluations and Findings for All Alternatives and the Cumulative Case**

The following evaluations are based on information relating to the environmental and subsistence consequences of alternatives A through D, and the cumulative impacts analysis as presented in Chapter IV: Environmental Consequences of the Resource Management Plan. The stipulations discussed in Appendix A of the Resource Management Plan are also considered for the alternatives to which they apply. The evaluations and findings focus on potential impacts to the subsistence resources themselves, as well as access to resources, and economic and cultural issues that relate to subsistence use.

### **1. *Evaluation and Findings for Alternative A***

Selection of Alternative A would result in continued management of the Kobuk-Seward Peninsula planning area as specified in the 1982 Northwest Management Framework Plan. Valid decisions contained in the Northwest MFP would be implemented if not already completed. Direction contained in existing laws, regulation and policy would also continue to be implemented, sometimes superseding provisions in the Northwest MFP. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed on a case-by-case basis and few uses would be limited or excluded as long as they were consistent with State and Federal laws. Fire would be managed consistent with the Alaska Land Use Plan Amendment for Wildland Fire and Fuels Management (BLM 2004b, 2005c).

## **a) Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs**

Under Alternative A, the primary impacts to subsistence would be associated with proposed inventory and monitoring efforts for a variety of resources, as well as the continuation of the current management of Recreation and OHV use in the planning area as described within the 1982 Northwest Management Framework Plan.

Extensive research projects, such as those conducted for inventory and monitoring purposes, have the potential to affect subsistence species and use in the planning area. Specifically, the following activities associated with data collection could displace subsistence resources from traditional harvest areas for the duration of the activity: temporary or long-term camps and associated facilities; the use of aircraft, especially helicopters, for aerial surveys; and the use of boats or ATVs. This activity is expected to be temporary and localized, and not affect any fish or wildlife at the population level. However, the most frequent complaint voiced by subsistence users on the North Slope of Alaska concerns the large amount of aerial disturbance to animals that occurs each field season in conjunction with scientific studies (BLM NPR-A Subsistence Advisory Panel 2002). At the same time, many of the proposed inventory and monitoring efforts would serve to benefit subsistence resources by providing valuable baseline information that would be used to maintain or improve habitat as well as wildlife and fish populations. Similarly, because every action in the planning area would be evaluated on a case-by-case basis under Alternative A, each research project could have BLM-imposed required operating procedures in order to minimize impacts to subsistence use.

Under Alternative A, the greatest impact to subsistence would likely result from continuing the current management standard of OHV and recreational use in the planning area. At present, both commercial and non-commercial recreational use on BLM lands in the planning area is relatively minor. However, there are a few heavily used areas where these activities compete directly with subsistence use, namely in the Squirrel River corridor and in the area around the community of Koyuk on Norton Bay. During scoping, residents from these areas expressed concern over the large number of sport hunters and guiding operations that not only compete with the subsistence users for resources, primarily moose, but also degrade the habitat due to the associated concentration of OHV use in a relatively short amount of time (BLM 2004c). Subsistence hunters from Kiana and Kotzebue maintain that the increase in air traffic and the presence of sport hunters in the Squirrel River area during the hunting season has resulted in the displacement of migrating caribou eastward, away from the traditional use areas for those communities and Noorvik. Under the current management plan, there is little that the BLM can do to limit the amount and type of use in these areas.

According to ADF&G, the current subsistence need for moose in Game Management Unit 23 is between 325-400 moose annually (Dau 2002a, 2004a), a number that is considered relatively low, in part, due to the large number of Western Arctic Caribou Herd (WACH) animals that are harvested annually. Should the WACH experience a rapid decline, subsistence hunter reliance on moose would increase throughout the planning area.

## **b) Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved**

The purpose sought to be achieved under Alternative A would be to continue the current management of BLM-managed lands in the planning area under the 1982 Northwest Management Framework Plan. Lands managed by other federal agencies in the planning area are managed under National Park Service or Fish and Wildlife Service planning documents. Other BLM lands in the State either already have land use planning documents in place, or are being addressed by separate planning processes. State and Native corporation Lands cannot be considered in a BLM plan, and under BLM policy other BLM lands outside of Alaska are not considered under ANILCA.

## **c) Evaluation of Other Alternatives that Would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes**

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters II and IV of the main body of the Resource Management Plan. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives that were considered but not analyzed in detail are also discussed in Chapter II.

## **d) Findings**

Alternative A may significantly restrict subsistence use and needs in the Squirrel River area. The impacts to subsistence users of moose by increased competition in this heavily used area, as well as the associated displacement of resources and OHV issues discussed above meet the threshold of “may significantly restrict subsistence use.” This finding applies to the communities of Kiana, Kotzebue, Noorvik and possibly Ambler.

## **2. Evaluation and Findings for Alternative B**

Alternative B lays the groundwork for active management to facilitate resource development on BLM lands in the planning area. In this alternative, constraints to protect resource values or habitat would be implemented in very specific geographic areas rather than across the planning area. All ANCSA (d)(1) withdrawals would be revoked on lands retained in long-term Federal ownership, increasing the potential for mineral exploration and development. Seasonal stipulations for oil and gas leasing in caribou habitat would not apply under this alternative (Appendix A). Travel and trail restrictions would be minimized. One Special Recreation Management Area would be identified in the Squirrel River to focus management on recreational use. In other areas recreation management would focus on dispersed recreation and management of permits. Management of State- and Native-selected lands would be mostly custodial.

## **a) *Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs***

Under Alternative B, the primary potential impacts to subsistence would be associated with the proposed management of the Livestock Grazing and Leasable Minerals programs. Impacts to subsistence could also result from mineral exploration and development under the Locatable Minerals program, as well as from proposed inventory and monitoring efforts under a variety of resource programs (see Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs beginning on page D-6). However, unlike Alternative A, inventory and monitoring efforts under Alternative B would be guided by a standard set of Required Operating Procedures that serve to protect habitat and resources from potential impacts as a result of permitted activity within the planning area (see Appendix A).

Alternative B has the greatest potential for impacts to subsistence resources from grazing because of the potential impacts to the Western Arctic Caribou Herd (WACH), which is the primary source of large land-mammal protein for most communities in the planning area. Under this alternative the entire planning area would be open to reindeer grazing, which could result in a reduction of grazing habitat for the WACH. However, it is unlikely that new reindeer grazing operations would be established outside of the Seward Peninsula during the life of the plan, due to the documented difficulties of managing a reindeer herd in the presence of caribou (Koskey 2003).

Under Alternative B, oil and gas leasing would be allowed on all BLM lands, except for within “no surface occupancy” zones established along the Pah, Shaktoolik, Ungalik, Inglutalik, Tubutulik, Kuzitrin, and Fish rivers, and along the west bank of the Noatak River. Oil and gas leasing can result in three associated activities: seismic exploration, exploratory drilling, and development. Under Alternative B, no seasonal restrictions would be imposed on oil and gas activity, however, oil and gas exploration would only be allowed to occur during the winter months under specific conditions (see Chapter II).

Subsistence activities that occur during the winter season, and therefore could be affected by seismic exploration or exploratory drilling include: furbearer trapping, fishing, and opportune hunting. Recent testimony by subsistence hunters in the National Petroleum Reserve-Alaska, where seismic activity is a common yearly occurrence, has indicated that seismic exploration does interfere with overland travel by snowmobile (Brower 2002). Specifically, the deep ruts left in the snow by seismic vehicles create difficult terrain to traverse, and result in excessive wear-and-tear on both snowmobiles and the sleds that are pulled behind them. Replacement or repair of these tools that are used for subsistence harvesting is costly. However, despite the hindrance and annoyance, seismic exploration does not create a substantial barrier between communities and subsistence resources. Additionally, seismic exploration or exploratory drilling are only expected to result in the temporary displacement of subsistence resources, will no effect on the population as a whole.

Impacts from oil and gas development and associated infrastructure are greater than for exploration, given the permanent and year-round nature of operations. If a development were to occur in the calving area of the WACH, or if infrastructure was constructed in such a way as to impede movement of the herd to important insect-relief habitat, then there would be significant impacts to this important subsistence resource. However, for the purposes of this planning effort, it is expected that one oil and gas developmental facility would be constructed in the northern portion of the planning area under Alternative B, outside of the WACH calving area. Other subsistence

species that could be affected by oil and gas include moose, brown bear and musk ox; however, impacts to these species as a result of Alternative B are considered negligible (See Wildlife, Alternative B, Impacts to Wildlife from Leasable Minerals discussion in Chapter IV). Although specific parameters concerning the projected development are not discussed, associated roads, pipelines, and docking facilities all serve to potentially displace animals until which time they become acclimated to the infrastructure. Additionally, roads, docks, and even remote airstrips constructed to aid production may serve as potential inroads for nonlocal hunters, increasing the amount of competition to resources in the area. Adequate stipulations and ROPs concerning the use of infrastructure by nonlocals would serve to minimize this type of impact.

Impacts to subsistence and wildlife from other potential industries, such as Locatable Minerals (hard-rock or placer mining), Mineral Materials (gravel pits), and Forest Products (timber sales) are expected to be minor given the anticipated levels of these activities. Under Alternative B, the Squirrel River would be designated as a SRMA (859,000 acres) and conflicts between users would be addressed by limiting the number of guides and outfitters allowed to operate in the area, and the number visitor use days. In this way, Alternative B has less impact than Alternative A with regard to subsistence use in this heavily-utilized area (see discussion under Alternative A).

## **b) Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved**

The purpose sought to be achieved under Alternative B would be to manage BLM lands in the planning area in order to optimize resource development, with little or no restraints on commercial activity. Lands managed by other federal agencies in the planning area are managed under National Park Service or Fish and Wildlife Service planning documents, and wide-scale development of these lands is limited or disallowed by the mission and goals of these federal lands as conservation system units. Other BLM lands in the State, such as the National Petroleum Reserve Alaska, are managed primarily to allow for oil and gas development under specific planning documents. Additional BLM lands are managed by current planning documents that allow a mixture of development and conservation following the BLM multiple-use mission, or are currently being evaluated through the planning process. State and Native Corporation Lands cannot be considered in a BLM plan, and under BLM policy other BLM lands outside of Alaska are not considered under ANILCA.

## **c) Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes**

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters II and IV of the main body of the Resource Management Plan. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives that were considered but not analyzed in detail are also discussed in Chapter II.

## **d) Findings**

Alternative B would not significantly restrict subsistence use by communities in or near the planning area given the management parameters outlined in Chapter II of the main document and including the Stipulations and ROPs found in Appendix A. Should the amount of oil and gas exploration or anticipated area of potential development expand, then this finding may need to be revised to take into account unmitigatable impacts to the WACH, and, therefore, to subsistence use.

## **3. Evaluation and Findings for Alternative C**

Alternative C emphasizes active measures to protect and enhance resource values. Production of minerals and services would be more constrained than in Alternatives B or D and in some areas, uses would be excluded to protect sensitive resources. Areas of Critical Environmental Concern (ACEC) and Special Recreation Management Areas (SRMA) are identified, and specific measures proposed to protect or enhance values within these areas. Several rivers are recommended suitable for designation under the Wild and Scenic River Act. Limited areas are proposed for Off Highway Vehicles to protect habitat, soil and vegetation resources. Most ANCSA (d)(1) withdrawals are revoked but some would be replaced with new withdrawals in order to protect or maintain resource values. This alternative treats lands selected by the State and by Native or village corporations as if it were to be retained in long-term Federal ownership.

### **a) Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs**

The analysis of the effects of Alternative C on subsistence find little impact as a result of management actions or designations within the planning area. In fact, many of the proposed actions serve to positively impact subsistence in that management would emphasize habitat and resource protection. While development activity could occur under this alternative, areas of critical habitat would be protected by special designation, and by the stipulations and ROPs as presented in Appendix A. Actions such as the creation of new SRMAs, SRAs, ACECs, and/or the designation of areas as wilderness or rivers as WSRs, do not limit or impose any restriction on subsistence use as per ANILCA Title VIII.

### **b) Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved**

The purpose sought to be achieved under Alternative C would be to manage BLM lands in the planning area in order to optimize conservation. Lands managed by other federal agencies in the planning area are managed under National Park Service or Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the State either already have land use planning documents in place that specify the amounts and types of activities that can or can not occur, or are currently being evaluated by separate planning processes. State and Native Corporation Lands cannot be considered in a BLM plan, and under BLM policy other BLM lands outside of Alaska are not considered under ANILCA.

### **c) Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes**

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters II and IV of the main body of the Resource Management Plan. These alternatives were created to represent a wide-range of potential activities that could occur on BLM Lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives that were considered but not analyzed in detail are also discussed in Chapter II.

### **d) Findings**

Alternative C would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources would be beneficial, and any impacts by way of the limited amount of development allowed to occur under this alternative would be minimized by stipulations and ROPs.

## **4. Evaluation and Findings for Alternative D**

Alternative D emphasizes a moderate level of protection, use, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative C. This alternative would designate one Research Natural Area (RNA), five ACECs, and two Special Recreation Management Areas. No rivers would be recommended as suitable for designation under the WSRA. This alternative would revoke most ANCSA (d)(1) withdrawals. The RNA would be withdrawn from mineral entry. This alternative describes interim and long-term management strategies for lands selected by the State, or Native regional or village corporations.

### **a) Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs**

Alternative D, much like Alternative C, finds little impact to subsistence use as a result of management actions. All lands within the planning area would be available for oil and gas leasing and impacts similar to those discussed under Alternative B could occur. However, protective measures in the form of Stipulations and ROPs (see Appendix A), including the seasonal restriction of activity, as well as the creation of special areas and ACECs, serve to protect wildlife and habitat from undue stress.

Under Alternative D, the highly utilized Squirrel River would be managed as semi-primitive motorized, and a Recreation Area Management Plan (RAMP) would be developed to address recreational use, taking into consideration current use levels, safety, resource impacts, operator tolerance, and quality of recreational experience. Using a public process, BLM would develop management objectives and strategies for the Squirrel River such as: limitations on total number of visitor use days and number of commercial operators; instituting additional permitting requirements; instituting seasonal closures or limitations on OHV use; and determining the appropriate level of

facility development. During the interim between approval of the RMP and the development of the RAMP, outfitters and guides would be managed at the 2004/2005 use level, and other users (transporters and general public) would have no set limits on use during this interim period. Under this scenario, impacts to subsistence users of the area due to increased competition from nonlocal hunters would continue, but would not increase, until which time the RAMP is in place. Once the RAMP is in place, it is envisioned that improved management of both casual and commercial recreation would result in reduced impacts to wildlife and their habitat, and thus, to subsistence.

## **b) Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved**

The purpose sought to be achieved under Alternative D is to manage BLM lands in the planning area following the BLM mission of multiple use, while at the same time protecting critical habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under National Park Service or Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the State either already have land use planning documents in place that specify the amounts and types of activities that can or can not occur, or are currently being evaluated by separate planning processes. State and Native Corporation Lands cannot be considered in a BLM plan, and under BLM policy other BLM lands outside of Alaska are not considered under ANILCA.

## **c) Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes**

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters II and IV of the main body of the Resource Management Plan. These alternatives were created to represent a wide-range of potential activities that could occur on BLM Lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives that were considered but not analyzed in detail are also discussed in Chapter II of the main document.

## **d) Findings**

Alternative D would not significantly restrict subsistence use by communities in the planning area. However, most other impacts to subsistence resources would be negligible, and any impacts by way of the limited amount of development allowed to occur under this alternative would be minimized by the Stipulations and ROPs discussed in Appendix A. These impacts to subsistence species are expected to be localized and temporary, and are not envisioned to impact resources at the population level. No impacts to access by subsistence users are expected to occur.

In the Squirrel River, competition for subsistence resources, primarily moose, occurs due to the large number of nonlocal hunters, especially those using the services of a hunting guide. Under Alternative D, guides would be limited to the current number in operation during the 2004/2005 season; however, there would be no set limit on the number of nonlocal hunters not using guides. According to ADF&G, the number of nonresident and nonlocal hunters in Game Management Unit 23 has and continues to increase, due to a decline in trophy animals and an increase on hunting

restrictions in other units (Dau 2004a). Currently, moose harvest levels are adequate given the abundance of caribou from the WACH, and the preference for caribou by subsistence users. However, if the WACH was impacted to the extent that herd numbers plummeted and harvest numbers declined, then subsistence users would require more moose to offset this shortage. If this occurred and the Squirrel River RAMP was not completed, then significant impacts to subsistence use could result, and revisions to this finding would need to be made.

## C. Evaluation and Findings for the Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the current action in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as being of great concern during scoping. Actions included in the cumulative analysis include, but are not limited to, the following:

- Exploration and development of hard rock resources at Rock Creek, located on private land north of Nome, are ongoing with plans to bring it into production by 2006.
- The Nome Road System includes approximately 200 miles of gravel road originating in Nome. The Nome-Teller Highway runs northwest from Nome to the village of Teller; the Council Highway runs east and north to the seasonal community of Council; the Taylor Highway runs north of Nome to the Kougarok River.
- The Northwest Alaska Transportation Plan (ADOT&PF 2004) outlines the possibility of the development of a Yukon River Highway. If this entire route were constructed, it would create road access from the Elliot Highway west of Fairbanks through the southern edge of the planning area to Nome. The highest priority segments of the Yukon River Highway are located east of the planning area and it is highly unlikely that Highway segments within the planning area would be completed during the life of this plan.
- Other road projects in the Northwest Alaska Transportation Plan include inter-village roads within the region, without a connection to the statewide road system. Inter-village roads would provide greater access to boat launch sites, permanent barge operations, and gravel sources, and improve community connections. Recommended road projects within the planning area include (ADOT&PF 2004): 29 miles of road in the Point Hope area; 18 miles of road in the Northwest Arctic Borough; and 135 miles of road in the Seward Peninsula region.
- As of 2004 the Red Dog Mine reports approximately 1,800 impacted acres. Exploration of mineralization in areas adjacent to Red Dog Mine is ongoing. A 52 mile haul road connects the mine to the DeLong Mountain Terminal. This is the only industrial road in the region.
- The De Long Mountain Terminal is an existing facility located at Portsite, north of Kivalina used to receive, store and load ore concentrate from Red Dog Mine. There are plans to upgrade this facility. If the project is approved and funding available, construction could potentially occur 2009-11. The tentatively recommended plan includes construction of an approximately 18,500-foot-long, 53-foot-deep dredged channel leading to a 1,450-foot-long trestle, carrying a roadway and enclosed concentrate conveyor from shore to a deep-draft dock. In addition, the dock has the capability to offload ocean going fuel tankers, with the fuel being stored in the existing fuel tank farm. The fuel would then be used for operations of Red Dog Mine and Portsite, and would be transhipped through the existing lightering barge dock to coastal and riverine fuel barges to serve numerous villages in northwestern arctic Alaska.

- Improvements to Portsite could result in additional development in the Northwest Arctic Borough or North Slope Borough. Those considered reasonably foreseeable include: expansion of Noatak airport; fuel transfer to communities; road system from De Long Mountain Terminal System to communities; and Kivalina relocation; and natural gas exploration near Red Dog Mine (U.S. Army Corps of Engineers 2005).
- There currently are 25 producing oil fields on the North Slope, with Prudhoe Bay, North Prudhoe Bay, Kuparuk River, Alpine field, Milne Point, and Endicott being the most productive.
- Within the National Petroleum Reserve-Alaska, nearly 15,000 miles of seismic survey was completed and interpreted between 1974 and 1982. Seismic work was discontinued after 1982 and did not resume until 1994 after the discovery of the Alpine Field. The total line-miles of seismic data acquired are not known but include at least 2,615 line-miles (BLM 2005h).
- The Northwest IAP/EIS predicted that as many as 36 exploration wells, 36 delineation wells, 12 production pads, and 295 miles of pipelines would be constructed (USDOJ BLM MMS 2003). Under this scenario, up to eight fields are expected to be developed.
- The Alpine field, which began producing on the Colville River Delta in 2000, is the closest that oil field infrastructure has come to the planning area. The Alpine oil field encompasses approximately 890,000 acres of federal, state, and private lands near the eastern edge of the National Petroleum Reserve-Alaska. Plans to construct satellite developments associated with the Alpine field in the eastern portion of the National Petroleum Reserve-Alaska are being prepared, and construction would likely begin by 2007. Oil is transported through a 34-mile pipeline to the Kuparuk River Unit. The Alpine oil field pipeline to the Kuparuk River Unit crosses under the Colville River channel. Ice roads and bridges provide access during the winter; otherwise there are no overland routes to this isolated field. The footprint of the Alpine oil field infrastructure, excluding the pipeline to the Kuparuk River Unit, is approximately 100 acres (BLM 2005h).
- Planning is currently under way for development in South National Petroleum Reserve-Alaska. The plan is expected to be completed in 2010 and could ultimately lead to solid mineral exploration and development in South National Petroleum Reserve-Alaska. Lead/zinc/silver deposits are the most likely to be developed. In conjunction with this development, a road could be constructed in the Howard Pass area. If the road were developed, it may generate interest in other types of mineral occurrences in the region, possibly including development of coal or phosphate. If the road connecting the region to either a port or development center is not developed, then solid mineral development would be unlikely to occur. There are four potential corridors, three of which have been identified by the Alaska Division of Geological and Geophysical Surveys (DGGs): Northern Foothills Corridor connecting to the Dalton Highway; Point Barrow Corridor, connecting to Barrow; Chukchi Sea Link/West Coast Link Corridor linking to Red Dog Mine; and Chukchi Sea Link/Omailk Lagoon Corridor connecting to the Chukchi sea near Omailk Lagoon or Point Lay.

## **a) Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs**

According to the wildlife analysis in Chapter IV of the main document, the combination of ongoing oil and gas development occurring on the North Slope on both State and Federal lands, future oil and gas development projected for the National Petroleum Reserve-Alaska, oil and gas development in the northern quarter of the planning area, and possible solid mineral exploration

and development in the same region, would have cumulative impacts on caribou from the WACH. In addition, the privatization of State or Native Corporation lands could lead to additional development. Depending on the location of development, these impacts could include: short or long-term disturbance to caribou calving habitat, insect relief habitat, and migratory routes; disruption of caribou movements; stress and disturbance impacts to caribou during all seasons of the year; and possible reductions in herd productivity. If significant activity occurred within the calving grounds or crucial insect relief habitat, these impacts could be significant.

Development of regional roads within the planning area would have the potential to negatively affect wildlife, and thus affect subsistence. These impacts would include habitat fragmentation, increased access into wildlife habitats, increased disturbance impacts, increased potential for mortality (road kills) and possible alteration of behavior or movement patterns of wildlife. Small roads that connect communities within the planning area may aid subsistence users in accessing their traditional harvest areas. However they may also concentrate hunting efforts along the road corridor, thus depleting resources from the area, and potentially altering harvest from currently-used traditional harvest areas. Increased competition for subsistence resource would likely result if smaller communities were lined to the existing road system within the State, as non-resident hunters would be able to access the area with little effort. This may also result in an increase in tourist traffic and recreational use of the area, resulting in additional impacts to wildlife. However, the construction of major road projects within the life of the plan would be dependant upon social and economical conditions and it is not clear which, if any, of these projects would be completed during the life of the plan. Because regional road construction in the planning area is so uncertain and the level of development projected through this plan so minimal, no cumulative impacts to subsistence species are anticipated

Currently, sea mammals comprise a significant portion of the annual harvest by most communities within the planning area. Due to the migratory nature of sea mammals within the area, should improvement be made at Portsie, sea mammal harvesting could be affected for the duration of the activity. This would lead to an increase in dependence on large land mammals such as caribou and moose. Should simultaneous activity take place that would reduce the amount of land mammals, especially the WACH, then a subsistence crisis would ensue for most communities within the planning area.

## **b) Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved**

The Cumulative Case, as presented in the planning document, contains information on reasonably foreseeable activities that could have an effect on the management decisions being analyzed as part of the RMP. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and are likely to occur. The Cumulative Case is not an implementable alternative that specifies land uses and management, and is instead a discussion of impacts that could affect the management decisions contained within Alternatives A through D. As such, no other lands are evaluated under the Cumulative Case.

### **c) Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes**

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters II and IV of the main body of the Resource Management Plan, as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives that were considered but not analyzed in detail are also discussed in Chapter II.

### **d) Findings**

The cumulative case, as presented in this analysis, may result in a reasonably foreseeable and significant restriction of subsistence use for most communities within the planning area, if significant activity occurred within the calving grounds or crucial insect relief habitat of the WACH. Currently, the WACH is a primary subsistence source for 30 communities in Northern and Northwestern Alaska, with approximately 15,000 animals harvested yearly (Dau 2003b).

## **D. Notice and Hearings**

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the Federal agency gives the required notice and holds a hearing in accordance with ANILCA Sec. 810(a)(1) and (2). The BLM will provide notice in the Federal Register that it has made positive findings pursuant to ANILCA Sec. 810 that Alternative A and the cumulative case presented in the Resource Management Plan/EIS meets the “may significantly restrict” threshold. As a result, public hearings will be held in the potentially affected communities of Kotzebue, Kiana, Noorvik, and Ambler. Notice of these hearings will be provided in the Federal Register and by way of the local media, including the Arctic Sounder newspaper and KOTZ, the local Kotzebue radio station, with coverage to many villages in Northwest Alaska.

## **E. Subsistence Determinations Under the ANILCA Sec. 810(a)(3)(A), (B), and (C)**

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the federal agency gives the required notice and holds a hearing in accordance with the ANILCA Sec. 810(a)(1) and (2), and makes the three determinations required by the ANILCA Sec. 810(a)(3)(A), (B), and (C). The three determinations that must be made are: 1) that such a significant restriction of subsistence use is necessary, consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and 3) that reasonable steps will be taken to minimize adverse impacts to

subsistence uses and resources resulting from such actions [16 U.S.C. Sec. 3120(a)(3)(A), (B), and (C)].

The BLM has found in this subsistence evaluation that Alternative A considered in this Resource Management Plan might significantly restrict subsistence uses. Therefore, the BLM will undertake the notice and hearing procedures required by the ANILCA Sec. 810 (a)(1) and (2) in conjunction with release of the Draft RMP/EIS in order to solicit public comment from the potentially affected communities and subsistence users.

The determination that the requirements of the ANILCA Sec. 810(a)(3)(A), (B), and (C) have been met will be analyzed in the Final ANILCA Sec. 810 Evaluation, using input from the communities in which subsistence hearings will be held.

