

APPENDIX A

ANILCA SECTION 810 ANALYSIS OF SUBSISTENCE IMPACTS

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APPENDIX A

ANILCA § 810 ANALYSIS OF SUBSISTENCE IMPACTS

In 2001, the President created the National Energy Policy Development Group (NEPDG), consisting of the Vice-President and other key cabinet members. The primary task of the group was to “develop a national energy policy designed to help the private sector, and, as necessary and appropriate, state and local governments, and promote dependable, affordable, and environmentally sound production and distribution of energy for the future” (NEPDG 2001). In May 2001, the NEPDG released the National Energy Policy report, a comprehensive list of findings and key recommendations that were adopted by the President, and that form the basis of the President’s National Energy Policy. Specifically, the policy directs the Secretary of the Interior to “consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska,” and that “such consideration should include areas not currently leased within the northeast corner of the National Petroleum Reserve – Alaska.” To that end, the Bureau of Land Management (BLM) initiated a process to amend the 1998 Integrated Activity Plan for the Northeast Planning Area of the National Petroleum Reserve – Alaska (NPR-A). The Amended IAP/EIS was issued in January 2005, and was followed by a record of decision (ROD) in January 2006. On September 25, 2006, the U.S. District Court for the District of Alaska found that the Amended IAP/EIS failed to adequately address the cumulative impacts increased activities in the Northeast NPR-A planning area will have when combined with increased activity in the Northwest NPR-A planning area. The court vacated that ROD and enjoined the Secretary of the Interior from further action in the Northeast planning area under that ROD. This Supplemental IAP/EIS provides additional analysis necessary to fully address the deficiencies noted by the court and updates relevant sections of the document with new information.

Chapters 3 (Affected Environment) and 4 (Environmental Consequences) of the Supplemental Northeast NPR-A Integrated Activity Plan/Environmental Impact Statement (Supplemental IAP/EIS) provide a detailed description of both the affected environment of the planning area and the potential adverse effects of the various alternatives to subsistence and to subsistence resources. This appendix uses the detailed information presented in the Supplemental IAP/EIS to evaluate the potential impacts to subsistence pursuant to Section 810(a) of the Alaska National Interest Land Conservation Act (ANILCA).

A.1 SUBSISTENCE EVALUATION FACTORS

Section 810(a) of ANILCA, 16 USC § 3120, 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 ANILCA § 810(a) must be completed for the Supplemental IAP/EIS. 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 § 3120).

The evaluation and findings required by ANILCA § 810 are set out for each of the four alternatives considered in the Supplemental IAP/EIS.

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 Supplemental IAP/EIS, 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 3 (Affected Environment) of the Supplemental IAP/EIS provides information on areas and resources important for subsistence use, and the degree of dependence of affected villages on different subsistence populations. Chapter 4 (Environmental Consequences) provides much of the data on levels of reductions and limitations under each alternative, and is used to determine whether the action would cause a significant restriction to subsistence. The information contained in the Supplemental IAP/EIS is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA § 810 must also include a Cumulative Impacts analysis. Section A.2, below, begins with evaluations and findings for each of the four alternatives discussed in the Supplemental IAP/EIS. Finally, the cumulative case, as discussed in Chapter 4 (Environmental Consequences) of the Supplemental IAP/EIS, 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—

Anaktuvuk Pass, Atqasuk, Barrow, Nuiqsut, and Wainwright. These communities are located within or adjacent to the Northeast Planning Area. The cumulative case expands the analysis to include the entire North Slope, including indirect effects to communities located in other areas of the state (i.e., the Yukon-Kuskokwim Delta), 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. To this end, the subsistence analyses of all alternatives, located in Chapter 4 (Environmental Consequences) of the Supplemental IAP/EIS, have been reviewed and found to comply with Environmental Justice.

A.2 ANILCA § 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 case as presented in Chapter 4 (Environmental Consequences) of the Supplemental IAP/EIS. The stipulations discussed in Chapter 2 (Alternatives) of the Supplemental IAP/EIS 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.

A.2.1 Evaluation and Findings for Alternative A (No Action Alternative)

Alternative A of the Supplemental IAP/EIS is the No Action Alternative. Selection of this alternative would result in continued management of the Northeast NPR-A as specified in the 1998 Northeast National Petroleum Reserve – Alaska IAP/EIS Record of Decision (ROD; 1998 Northeast IAP/EIS ROD). In effect, Alternative A is the preferred alternative from the previous 1998 EIS, and as such, a subsistence evaluation as required by the ANILCA § 810 has already been completed. The evaluation and findings presented here reaffirm the previous conclusion that impacts to subsistence as a result of this alternative would be minimal.

A.2.1.1 Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs

Under Alternative A, 13% of the planning area would remain unavailable (87% available) for oil and gas leasing, including much of the Teshekpuk Lake Special Area, and important waterfowl and caribou habitat. All of the special areas and site-specific prohibitions, as well as the 79 stipulations defined in the ROD, would remain in effect.

The analysis of Alternative A on subsistence presented in **section 4.3.12, *No Action Alternative, Subsistence***, considers the effects of non-oil and gas activities, the effects of oil and gas activities, the effects of oil spills, and the effectiveness of the stipulations required by BLM, as discussed in the 1998 Northeast IAP/EIS ROD. The analysis concludes that the No Action Alternative would have a negligible effect on subsistence species and on access to subsistence resources, and that mitigation measures developed by BLM in conjunction with local communities would serve to minimize, to the extent possible, impacts to subsistence use by the communities of Anaktuvuk Pass, Nuiqsut, Atqasuk, Wainwright or Barrow.

Effects to subsistence resources by non-oil and gas activities consist primarily of those actions associated with research. Numerous studies are conducted on a year-round basis on the North Slope, including aerial surveys by fixed-wing aircraft or helicopter, or ground surveys on foot or by off-highway vehicle (OHV), all of which have the potential to disturb animals. The most frequent complaint voiced by local subsistence users is that a large amount of aerial disturbance to animals occurs each field season in conjunction with scientific studies (Subsistence Advisory Panel [SAP] Minutes, June 6, 2002 meeting; SAP Minutes, August 22, 2002 meeting). Many of the scientific studies that currently occur are a result of stipulations imposed on oil and gas activities in the planning area; however, these same mandatory stipulations serve to minimize the potential effects of conducting research. Based on the analysis presented in Chapter 4 (Environmental Consequences), the effects of non-oil and gas activities on the species utilized by subsistence users is expected to be localized and short-term, and to have no regional population effects.

Oil and gas-related activities allowed under the No Action Alternative include seismic exploration, exploratory drilling, and development/production. Each of these activities has the potential to displace animals, with exploration potentially causing temporary displacement in the area of activity, and development/production potentially causing multi-year displacement during construction, and until the animal becomes habituated to the resultant infrastructure. Access by subsistence users could be impacted if the animals they wish to hunt have been displaced to areas much farther from their normal hunting grounds. However, many of the stipulations in the 1998 ROD would minimize the effects of oil and gas activities on animal populations, their range, and access to hunting areas by subsistence users (see **section 4.3.12.3, *Effectiveness of Stipulations***).

Oil spills have the potential to impact subsistence species as well as subsistence harvest patterns, depending on the amount and the location of the spill. Small spills are unlikely to cause great damage, especially if contained on land. Large spills are unlikely to occur during the exploration phase of oil development, but could occur once production infrastructure and facilities were in place. Several stipulations pertaining to spills and spill response are included under the No Action Alternative, which serve to reduce the potential impacts of oil spills to subsistence species and use.

As stated in **section 4.3.13.4, *Sociocultural Systems, Conclusion***, the 1998 Northeast IAP/EIS ROD was the result of several years of collaboration between the communities near the planning area, local governments and agencies, and BLM. The stipulations comprise essential protections for subsistence resources, cabins, camps, and river corridors, and also define the system of conflict negotiation to be used by permittees, leaseholders, subsistence users, and the BLM. Residents living on the North Slope, especially those in the village of Nuiqsut, view the 1998 stipulations, river setbacks, and designated special areas as a negotiated compromise between the Iñupiat people, the federal government, and the oil industry. Retention of the 1998 Northeast IAP/EIS ROD is favored by many individuals, local agencies, and local governments, as the 1998 Northeast IAP/EIS ROD is viewed as an effective plan that allows for oil and gas activity and the Iñupiat way of life to effectively coexist (ENSR 2004 Public Scoping Summary Report for the Amendment to the National Petroleum Reserve – Alaska Integrated Activity Plan/Environmental Impact Statement).

A.2.1.2 Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gave the Secretary of the Interior the authority to conduct oil and gas leasing in the Northeast NPR-A. However, the law prohibited petroleum production from occurring in the NPR-A until authorized by Congress. In 1980, Congress granted that authorization and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska." BLM is undertaking this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy, as well as BLM's responsibilities to manage these lands under authority of the NPRPA and Federal Land Policy and Management Act (FLPMA), and other authorities cited elsewhere in this EIS. Alternative A would continue the authorization of oil and gas exploration or development activities in the Northeast NPR-A under the 1998 Northeast IAP/EIS ROD. Other lands managed by BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. 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.

A.2.1.3 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: 1) making more land in the Northeast NPR-A unavailable for oil and gas leasing, or 2) not allowing oil and gas activity to occur. However, neither of these alternatives would satisfy the underlying purpose of the IAP/EIS to make more lands available for leasing. The Secretary of the Interior has directed BLM to consider additional lands in the Northeast NPR-A to the extent it can be done in an environmentally sound manner. Reducing the number of acres available for energy development would contradict this direction, and would go against the President's stated National Energy Policy. Additionally, the 1998 Northeast IAP/EIS ROD allowed the BLM to enter into contracts with several oil companies, by leasing land for oil and gas exploration. All of these leases are still in effect. **Section 2.5, *Alternatives Considered but Eliminated from Detailed Analysis*** of the Supplemental IAP/EIS discusses other alternatives that were considered, but eliminated from detailed analysis.

A.2.1.4 Findings

Alternative A would not significantly restrict subsistence uses and needs. The impacts to subsistence resources and access discussed above would be minimal, or would be adequately mitigated by special area designation and stipulations under which the lessee/permittee must operate. This finding applies to Anaktuvuk Pass, Atqasuk, Barrow, Wainwright, and Nuiqsut.

A.2.2 Evaluation and Findings for Alternative B

Alternative B, as well as the stipulations and required operating procedures (ROPs) accompanying it, takes into consideration all comments and concerns generated during the scoping process, as well as the stated direction from the Secretary of the Interior to look at lands previously unavailable for leasing in the planning area. Alternative B of the Supplemental IAP/EIS makes approximately 95% of all lands within the planning area available for oil and gas leasing, which includes approximately 387,000 acres that were formerly off-limits to leasing. Management practices would emphasize performance-based stipulations and ROPs on surface activities, consultation with local residents, and coordinated scientific studies to protect wildlife habitat, subsistence use areas, and other resources. In addition, approximately 213,000 acres northeast of Teshekpuk Lake that are currently unavailable for oil and gas leasing would remain unavailable for leasing, to provide for protection of wildlife and subsistence resources.

A.2.2.1 Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs

The analysis of Alternative B on subsistence is presented in **section 4.4.12, *Alternative B, Subsistence***. This analysis considers the effects of non-oil and gas activities, the effects of oil and gas activities, the effects of oil spills, and the effectiveness of the associated stipulations and ROPs as presented by BLM. The analysis concludes that the effect of Alternative B on subsistence would be greater than that of Alternative A, but would remain localized and would not significantly affect subsistence species, access to subsistence resources, or subsistence use by the communities of Anaktuvuk Pass, Nuiqsut, Atqasuk, Wainwright or Barrow.

At issue in this evaluation are the differences between Alternative A and Alternative B, and whether these differences would be significant enough to cause a substantial impact to the populations of subsistence species, to displace these species from their current habitat, or to limit access to current, traditional hunting areas by subsistence users under Alternative B. Alternative B primarily differs from the No Action Alternative in the following regards:

- Performance-based stipulations and ROPs would replace the 79 prescriptive stipulations in the 1998 Northeast IAP/EIS ROD. Stipulations refer to requirements that the leaseholder must comply with and are attached to the lease document, whereas ROPs are requirements that any operator working in the Northeast NPR-A would be required to follow, and would be attached to permits for activity.
- Some of the 79 stipulations from the 1998 Northeast IAP/EIS ROD that are already required by existing regulation or law would not have a corresponding stipulation or ROP under Alternative B. This does not mean that the lessee or permittee would be able to ignore the actions/activities covered by the original stipulations, only that these actions/activities would be covered by law or regulation, and, therefore, must be followed in order to comply with the law. This approach would actually serve to strengthen the intent, in that lessees/permittees would not mistakenly believe that they could be granted an exception to the stipulation using the BLM exception process.

- An additional 387,000 acres would be available for oil and gas leasing. However, within these additional acres, no permanent oil and gas facilities would be allowed within $\frac{1}{4}$ mile of the shore of identified goose-molting lakes, or within $\frac{3}{4}$ mile of the coast. Approximately 213,000 acres located in the goose molting/caribou habitat use area northeast of Teshekpuk Lake would remain unavailable for oil and gas leasing.
- Surface activity, including exploratory and delineation wells, would be allowed within the former “No Surface Activity” zone south of Teshekpuk Lake. However, the construction of permanent facilities would not be allowed until the lessee has conducted a study that includes a minimum of 3 years' worth of data on caribou movements.
- “Sensitive Area Consultation” zones from the 1998 Northeast IAP/EIS ROD would be replaced by ROP H-1, which requires consultation with the North Slope Borough (NSB), the Subsistence Advisory Panel, and affected communities, regardless of where the activity would take place.
- Permanent oil and gas facilities would not be allowed within $\frac{1}{4}$ mile of lakes identified as “Deep Water Lakes.” The 1998 Northeast IAP/EIS ROD did not allow permanent facilities within $\frac{1}{4}$ mile of fish-bearing lakes in a large area south of Teshekpuk Lake, but each individual lake was not specifically identified.

Of the differences between alternatives A and B, only two would potentially cause Alternative B to substantially affect subsistence resources or their use: the availability of additional land for oil and gas leasing from within the area north and west of Teshekpuk Lake, and the removal of the “No Surface Occupancy” zone south of Teshekpuk Lake. Other changes, such as updating the stipulations and adopting ROPs to conform to an adaptive management approach, would not reduce the level of protection afforded.

It is expected that impacts to terrestrial mammals and subsistence use in the vicinity of Teshekpuk Lake would be greater under Alternative B than under the No Action Alternative, particularly with respect to caribou calving and insect-relief habitat, given the additional 387,000 acres that would be available for oil and gas leasing. However, the 213,000 acres that would be unavailable to leasing are important to caribou migrating between calving and insect-relief areas and the wintering grounds. This area, as well as the stipulations that have been developed to further protect caribou found near Teshekpuk Lake, would serve to protect the resource from substantial decline at the population level (see **sections 4.4.9.1, *Terrestrial Mammals***, and **4.4.12.2, *Subsistence, Oil and Gas Exploration and Development Activities***).

Impacts are also expected to be greater for birds, especially brant, under Alternative B when compared to Alternative A (see **section 4.4.8, *Birds***). The communities of Barrow and Nuiqsut utilize the planning area for harvesting birds, with birds comprising between 1.8–2.6% of each community’s annual harvest (Fuller and George 1997). The species most heavily harvested by residents include white-fronted geese, black brant, and king and common eiders. As many as 30% of the Pacific flyway population of brant may be present in the Teshekpuk Lake goose molting area during the molting period, making it one of the single most important areas for molting brant overall. As a result, impacts to brant in the planning area that would result in population level declines have the potential to affect harvesters across the North Slope, in Northwest Alaska, and in the Yukon-Kuskokwim Delta. However, the primary reason for making 213,000 acres unavailable to leasing under Alternative B is to protect important habitat for caribou and molting geese. In addition, numerous lease stipulations and ROPs were developed to protect birds and their habitat within the planning area, including the K-stipulations, which provide for a number of measures designed to reduce the effects of development on molting geese by establishing setbacks from lake shorelines within which

construction of permanent oil and gas facilities would not be permitted, regulating water extraction from lakes, and minimizing or eliminating disturbance from aircraft during critical periods.

Impacts to vegetation, fish, and other resources used for subsistence purposes are expected to be minor (see **sections 4.4.5, *Vegetation*; 4.4.7, *Fish*; and 4.4.9, *Mammals***).

Under Alternative B, the greatest potential impact to subsistence use would be the removal of the “No Surface Activity” zone, which extends from the west side to the east side of the planning area in a band south of Teshekpuk Lake. Comments received during the scoping process stressed the importance of protecting essential caribou movement/migration corridors, located both to the east and the west of Teshekpuk Lake. The construction of permanent facilities, such as pipelines, roads, and production pads, within these narrow corridors could result in displacement of the Teshekpuk Lake Caribou herd, if the caribou were unable to get to their known insect-relief habitat during periods of intense insect harassment. Furthermore, removal of the “No Surface Activity” zone, in addition to opening more lands for leasing, would allow permanent facilities to be constructed within much of the Teshekpuk Lake Herd calving area. While such construction might not affect the population of the herd, it could result in a dramatic shift in the current use-area of the caribou, resulting in displacement of the herd. Stipulation K-5 would serve to minimize the potential disturbance to caribou by requiring a 3-year study of caribou movements in the vicinity of the facility, before BLM would authorize construction.

In addition to the potential displacement of subsistence resources under Alternative B, the elimination of the “No Surface Activity” zone, as well as the additional acres available for leasing, could result in future infrastructure such as pipelines, roads, production pads, and wells. Oil industry infrastructure on the east side of the Colville River has resulted in the nonuse of this area by the residents of Nuiqsut, who do not feel comfortable hunting near or around oil developments. If enough economically recoverable oil was discovered to warrant additional development in the Nuiqsut, Atqasuk, or Barrow traditional subsistence use areas, hunters could avoid the development. The result would be an overall reduction in lands used for subsistence purposes. Effective communication and consultation by the oil industry, local communities, and the BLM would be essential when, and if, development were to occur in the NPR-A. Required Operating Procedures H-1 and H-2 would be the primary mitigation measures in place to ensure adequate access to traditional hunting areas by the residents of Nuiqsut, Barrow, and Atqasuk in the Teshekpuk Lake area.

As stated in the evaluation for the Alternative A, residents living on the North Slope, especially those in the village of Nuiqsut, view the 1998 Northeast IAP/EIS ROD as a negotiated compromise between the Iñupiat people, the federal government, and the oil industry. Considerable changes to the decisions in the 1998 Northeast IAP/EIS ROD, without the consensus of local communities, governments, and agencies, could create an insurmountable rift between the people of the North Slope and the Federal government, especially if their Iñupiat way of life was threatened.

A.2.2.2 Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The NPRPA, as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in the NPR-A until authorized by Congress. In 1980, Congress granted that authorization and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska." BLM is undertaking this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy, as well as BLM's responsibilities to manage these lands under authority of the NPRPA and FLPMA and other authorities cited elsewhere in this Supplemental IAP/EIS. Alternative B would continue the authorization of oil and gas exploration or development activities in the NPR-A under performance-based stipulations and ROPs identified in **section 2.7, *Stipulations and Required Operating Procedures*** of the Supplemental IAP/EIS. Other lands managed by BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. 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 the ANILCA.

A.2.2.3 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: 1) making more land in the Northeast NPR-A unavailable for oil and gas leasing, or 2) not allowing oil and gas activity to occur. However, neither of these alternatives would satisfy the underlying purpose of the IAP/EIS to make more lands available for leasing. The Secretary of the Interior has directed BLM to consider additional lands in the Northeast NPR-A to the extent it can be done in an environmentally sound manner. Reducing the number of acres available for energy development would contradict this direction, and would go against the President's stated National Energy Policy. Additionally, the 1998 Northeast IAP/EIS ROD allowed BLM to enter into contracts with several oil companies, by leasing land for oil and gas exploration. All of these leases are still in effect. **Section 2.5, *Alternatives Considered but Eliminated from Detailed Analysis*** of the Supplemental IAP/EIS discusses other alternatives that were considered, but eliminated from detailed analysis.

A.2.2.4 Findings

Alternative B would not significantly restrict subsistence use by communities in or near the planning area (Anaktuvuk Pass, Atqasuk, Barrow, Wainwright and Nuiqsut). The impacts to most subsistence resources and access to resources would be minimal, yet displacement of the Teshekpuk Lake Herd caribou could occur, and black brant populations have shown a declining trend in recent years. However, adequate stipulations and ROPs have been incorporated in Alternative B—including specific procedures for subsistence consultation with directly affected subsistence communities, requirements for extensive studies of caribou movement, and setbacks or other protective measures specific to birds—to ensure that significant restrictions to subsistence uses and needs would not occur.

A.2.3 Evaluation and Findings for Alternative C

Under Alternative C of the Supplemental IAP/EIS, all land under the stewardship of BLM within the planning area would be available for oil and gas leasing. All of the stipulations and ROPs included in Alternative B would also apply to Alternative C.

A.2.3.1 Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs

The analysis of the effects of Alternative C on subsistence, presented in **section 4.5.12, *Alternative C, Subsistence***, considers the effects of non-oil and gas activities, oil and gas activities, and oil spills, and the effectiveness of the stipulations and ROPs required by BLM. The analysis concludes that Alternative C would not significantly affect primary subsistence species, access to subsistence resources, or subsistence use by the communities of Anaktuvuk Pass, Atqasuk, Barrow, Wainwright or Nuiqsut. Similarly, while all analysts feel that the impact of Alternative C would be greater than that of alternatives A or B, these impacts are still viewed as being localized, of short duration, and not significant at the population level for most species.

Analyses presented for individual subsistence species (e.g., marine mammals, land mammals, and fish) also indicate that there would not be significant impacts to these species under Alternative C. However, it is expected that impacts to birds in the vicinity of Teshekpuk Lake and throughout the northern portion of the planning area would be greater under Alternative C, particularly with respect to molting waterfowl, given the greater overall scale of the assumed development activities. Impacts to birds from disturbances could be even greater if oil and gas activities occurred in areas with high bird concentrations, with high quality habitat, or that are used by species of concern.

For caribou, it is estimated that there would be an increase in the likelihood of impacts to calving areas and migration routes leading to insect-relief habitat, as well as an increased likelihood of development occurring within insect-relief habitat. If the TLH is partially displaced from its calving area, or if caribou are impeded from reaching the calving area, recent surveys indicate that calving success would most likely be reduced. While there have been no experiments conducted with the TLH to determine whether oil development in the calving area would displace caribou or affect the productivity of the herd, caribou behavior during 1997 and 2001 suggest oil development in the TCH calving area could impact caribou.

Despite the increase in potential impacts to birds or caribou under Alternative C, most analysts indicate that the proposed stipulations and ROPs effectively mitigate any potential impacts resulting from oil and gas activity. Therefore, the potential impacts are lessened, and would not result in population level declines.

As discussed for Alternative B, eliminating the “No Surface Activity” zone, as well as making all lands available for leasing, could result in future infrastructure such as pipelines, roads, production pads, and wells. Oil industry infrastructure on the east side of the Colville River has resulted in the nonuse of this area by the residents of Nuiqsut, who do not feel comfortable hunting near or around oil developments. If enough economically recoverable oil was discovered to warrant additional development in the Nuiqsut, Atqasuk, or Barrow traditional subsistence use area, hunters could avoid the development. The result would be an overall reduction in lands used for subsistence purposes. Effective communication and consultation by the oil industry, local communities, and BLM would be essential when and if development were to

occur in the Northeast NPR-A. Required Operating Procedures H-1 and H-2 would be the primary mitigation measures in place to ensure adequate access to traditional hunting areas by the residents of Nuiqsut, Barrow, and Atkasuk in the Teshekpuk Lake Special Area.

As stated in the evaluations for alternatives A and B, residents living on the North Slope, especially those in the village of Nuiqsut, view the 1998 Northeast IAP/EIS ROD as a negotiated compromise between the Iñupiat people, the federal government, and the oil industry. Considerable changes to the decisions in the 1998 Northeast IAP/EIS ROD without the consensus of local communities, governments, and agencies to create an insurmountable rift between the people of the North Slope and the federal government, especially if their Iñupiat way of life was threatened.

A.2.3.2 Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The NPRPA, as amended, gave the Secretary of the Interior the authority to conduct oil and gas leasing in the Northeast NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska." BLM is undertaking this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of the NPRPA and FLPMA and other authorities cited elsewhere in this EIS. Alternative C would continue the authorization of oil and gas exploration or development activities in the Northeast NPR-A under performance-based stipulations identified in **section 2.7, *Stipulations and Required Operating Procedures*** of the Supplemental IAP/EIS. Other lands managed by BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. State and Native Corporation Lands cannot be considered in a BLM plan, and other BLM lands outside of Alaska are not considered under the ANILCA as per BLM Policy.

A.2.3.3 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: 1) making more land in the Northeast NPR-A unavailable for oil and gas leasing, or 2) not allowing oil and gas activity to occur. However, neither of these alternatives would satisfy the underlying purpose of the IAP/EIS to make more lands available for leasing. The Secretary of the Interior has directed BLM to consider additional lands in the Northeast NPR-A to the extent it can be done in an environmentally sound manner. Reducing the number of acres available for energy development would contradict this direction, and would go against the President's stated National Energy Policy. Additionally, the 1998 Northeast IAP/EIS ROD allowed the BLM to enter into contracts with several oil companies, by leasing land for oil and gas exploration. All of these leases are still in effect. **Section 2.5, *Alternatives Considered but Eliminated from Detailed Analysis of the Supplemental IAP/EIS*** discusses other alternatives that were considered, but eliminated from detailed analysis.

A.2.3.4 Findings

Alternative C would not significantly restrict subsistence use by the communities of Anaktuvuk Pass, Atqasuk, Barrow, Wainwright and Nuiqsut. The impacts to subsistence resources and access to resources would be minimal, yet displacement of the Teshekpuk Lake Herd could occur. However, adequate stipulations and ROPs have been incorporated, including specific procedures for subsistence consultation with directly affected subsistence communities and requirements for extensive studies of caribou movement, to ensure that significant restrictions to subsistence uses and needs would not occur.

A.2.4 Evaluation and Findings for Alternative D—Preferred Alternative

Alternative D, the Preferred Alternative, would make approximately 86% (approximately 3.94 million acres) of the planning area's 4.6 million acres available for oil and gas leasing immediately. An additional approximately 9% (approximately 430,000 acres) would be deferred from leasing for ten years after signing of the Record of Decision (Map 2-4). Leasing could occur after that time if the existing NEPA analysis is adequate. On approximately 1,450,000 acres, including more than half of the 430,000 acres that could be leased after ten years, the alternative would prohibit permanent oil and gas facilities, except pipelines and, in some cases, roads. Management practices would emphasize performance-based stipulations and ROPs on surface activities, consultation with local residents, and coordinated scientific studies to protect wildlife habitat, subsistence use areas, and other resources.

The lands made available for immediate leasing would include all lands made available under Alternative A, except approximately 60,000 acres within the exterior shore of Teshekpuk Lake (i.e., the exclusion from leasing includes islands within the lake). The lands that would be available for leasing ten years after the signing of the ROD would include all additional lands in the planning area not within the exterior shore of Teshekpuk Lake. Under the Alternative D, Teshekpuk Lake and its islands (approximately 219,000 acres) would be unavailable for oil and gas leasing. Exploratory drilling and pipeline construction would be precluded in the deferred area for the length of the deferral and in Teshekpuk Lake length of the deferral, except that current leases encompassing parts of Teshekpuk Lake and its islands would not be affected as long as the leases are renewed. Upon relinquishment or expiration of existing leases for lands in Teshekpuk Lake and its islands, lands would be unavailable for leasing.

Alternative D would make available after ten years approximately 430,000 acres that were unavailable in the 1998 ROD. The additional lands made available by Alternative D are within the area of highest oil and gas potential in the Northeast NPR-A Planning Area, and include a part of the Teshekpuk Lake Special Area (TLSA).

A.2.4.1 Evaluation of the Effect of Use, Occupancy, or Disposition on Subsistence Uses and Needs

The analysis of Alternative D on subsistence is presented in **section 4.6.12, *Alternative D, Subsistence***. This analysis considers the effects of non-oil and gas activities, the effects of oil and gas activities, the effects of oil spills, and the effectiveness of the associated stipulations and ROPs as presented by BLM. The analysis concludes that the effect of the Alternative D would be greater than that of Alternative A, and would remain localized and not significantly affect subsistence species as long as activity occurred outside of key habitat areas or migratory zones when animals were present. However, access to subsistence resources and an alteration in subsistence use patterns by the communities of Nuiqsut, Barrow, and possibly Atqasuk

would likely result from future development occurring in currently used traditional harvest areas.

It is expected that impacts to terrestrial mammals and subsistence use in the vicinity of Teshekpuk Lake would be greater under Alternative D than under the No Action Alternative, particularly with respect to caribou calving and insect-relief habitat, given the additional 430,000 acres that would be available for oil and gas leasing. However, limiting the amount of acreage available to permanent oil and gas activities in the seven new lease tract areas north of Teshekpuk Lake (Lease Stipulation K-11), as well as Lease Stipulations K-5, K-9, and K-10, serve to minimize potential impacts. These stipulations have been developed to protect caribou near Teshekpuk Lake, and would serve to protect the resource from substantial decline at the population level (see **sections 4.6.9.1, *Terrestrial Mammals*, and 4.6.12.2, *Subsistence, Oil and Gas Exploration and Development Activities***). Similarly, impacts to birds, especially black brant and other primary subsistence species, would be lessened by the additional stipulations proposed under Alternative D. Impacts to vegetation, fish, and other resources used for subsistence purposes are expected to be minor (see **sections 4.6.5, *Vegetation*; 4.6.7, *Fish*; and 4.6.9, *Mammals***).

The primary impact to subsistence use as a result of Alternative D is the impact to the subsistence user, and not necessarily the resource. Oil industry infrastructure on the east side of the Colville River has resulted in the nonuse of this area by the residents of Nuiqsut, who do not feel comfortable hunting near or around oil developments. If enough economically recoverable oil was discovered to warrant additional development in the Nuiqsut, Atqasuk, or Barrow traditional subsistence use areas, history has shown that hunters would avoid the development. The result would be an overall reduction in lands used for subsistence purposes. Effective communication and consultation by the oil industry, local communities, and the BLM would be essential when, and if, development were to occur in the NPR-A. Deferring leasing for ten years on 430,000 acres within the TLSA, as well as limiting the number of acres available for permanent facilities north of Teshekpuk Lake helps to reduce this impact. Additionally, Required Operating Procedures H-1 and H-2, which call for additional consultation and notification by the oil companies to local communities, would help to alleviate access issues with regard to traditional hunting areas by the residents of Nuiqsut, Barrow, and Atqasuk in the Teshekpuk Lake Special Area.

A.2.4.2 Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The NPRPA, as amended, gave the Secretary of the Interior the authority to conduct oil and gas leasing in the Northeast NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska."

BLM is undertaking this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of the NPRPA and FLPMA and other authorities cited elsewhere in this EIS. Alternative D would continue the authorization of oil and gas exploration or development activities in the Northeast NPR-A under performance-based stipulations and ROPs identified in **section 2.7**,

Stipulations and Required Operating Procedures of the Supplemental IAP/EIS. Other lands managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. State and Native Corporation Lands cannot be considered in a BLM plan, and other BLM lands outside of Alaska are not considered under ANILCA as per BLM Policy.

A.2.4.3 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: 1) making more land in the Northeast NPR-A unavailable for oil and gas leasing, or 2) not allowing oil and gas activity to occur. However, neither of these alternatives would satisfy the underlying purpose of the IAP/EIS to make more lands available for leasing. The Secretary of the Interior has directed BLM to consider additional lands in the Northeast NPR-A to the extent it can be done in an environmentally sound manner. Reducing the number of acres available for energy development would contradict this direction, and would go against the President's stated National Energy Policy. Additionally, the 1998 Northeast IAP/EIS ROD allowed the BLM to enter into contracts with several oil companies, by leasing land for oil and gas exploration. All of these leases are still in effect. **Section 2.5, *Alternatives Considered but Eliminated from Detailed Analysis of the Supplemental IAP/EIS*** discusses other alternatives that were considered, but eliminated from detailed analysis.

A.2.4.4 Findings

Alternative D would not significantly restrict subsistence use by the communities of Anaktuvuk Pass, Atkasuk, Barrow, Wainwright and Nuiqsut. The impacts to subsistence resources would be minimal, even though displacement of the Teshekpuk Lake Herd could occur. Impacts to the subsistence user, including access, comprise the greatest potential impact, however, adequate protective measures have been incorporated, including the deferral of leasing for ten years in the area north of Teshekpuk Lake, the limited amount of acres available for leasing in the seven new lease tracks north of Teshekpuk Lake, making Teshekpuk Lake unavailable for leasing, specific procedures for subsistence consultation with directly affected subsistence communities, and requirements for extensive studies of caribou movement, to ensure that significant restrictions to subsistence uses and needs would not occur. While the subsistence user may be impacted by development within the planning area as a result of hunter avoidance of facilities and infrastructure, the requirements to hold workshops to discuss the placement of allowed permanent facilities within key caribou habitat proposed allowable use under Alternative D does not restrict or otherwise limit in any way subsistence harvesting near infrastructure or facilities.

A.2.5 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. Oil and gas activities considered in the analysis include past development and production, present development, reasonably foreseeable future development, and speculative development. Activities not associated with oil and gas are also considered. All reasonably foreseeable future activities that may contribute to cumulative effects are considered in this analysis.

Actions included in the cumulative analysis include, but are not limited to the following:

- Offshore exploration and development in the Beaufort and Chukchi seas;
- Currently-producing fields/developments (Prudhoe Bay, Kuparuk, Alpine, Meltwater);
- Possible future developments, including the increased likelihood of development in Northwest NPR-A;
- Additional lease sales both on State of Alaska lands and in the Northwest NPR-A;
- The continuation of exploration on current leases in the Northeast NPR-A and additional lease sales in this same area; and
- Gas Development on the North Slope.

Moreover, these actions are considered in light of the shifting environmental conditions presented by climate change.

A.2.5.1 Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

Section 4.7, *Effects of the Cumulative Case* of the Supplemental IAP/EIS contains a detailed description of the cumulative-case scenario, including past effects, present effects, and the future possible oil field and infrastructure development that this evaluation uses. This assessment and finding assumes that all future development in the NPR-A would be subject to the stipulations and ROPs proposed in the Supplemental IAP/EIS. The cumulative analysis expands the area of potential impact beyond the planning area, to the entire North Slope Borough. Additionally, the impacts to subsistence use of migratory species, such as waterfowl, are also discussed.

The analysis of the effects of the cumulative case on subsistence presented in **section 4.7.7.12, *Analysis of Cumulative Effects by Resources, Subsistence*** indicates that cumulative activity on the North Slope has the potential to significantly restrict subsistence use for the communities of Anaktuvuk Pass, Atqasuk, Barrow, Wainwright and, especially, Nuiqsut. Foreseeable development in the Northeast NPR-A could extend from the Colville River Delta north of Nuiqsut to an area southwest of the village, which would effectively encircle the community, making it necessary for subsistence hunters traveling in nearly every direction to pass through some kind of development on the way to subsistence harvest areas. Because Iñupiat hunters are reluctant to use firearms near oil production facilities and pipelines, there would be a perceived barrier to harvest in these areas. Subsistence users currently avoid the Kuparuk and Meltwater areas because of the physical barriers pipelines and elevated gravel roads pose to winter snowmachine travel, and have expressed concerns about hunting close to oil production and processing facilities because of perceived regulatory barriers (ENSR 2004). Additionally, many community members fear contamination of their subsistence resources by oil production facilities.

Subsistence resources also have the potential to be impacted under the cumulative case. As stated in **section 4.7.7.9:**

Cumulative effects on caribou distribution and abundance are likely to be long-term, lasting as long as the life of the oil fields. Any reduction in the calving and summer habitat use by cows and calves from future onshore leasing would represent a functional loss of habitat that could result in long-term effects on the caribou herds' productivity and abundance.

The effects of oil and gas activities in the NPR-A would be greatest on those herds that use the planning area, specifically the Teshekpuk Lake and the Western Arctic herds. Currently, the Teshekpuk Lake Herd is the primary source of caribou for the communities of Anaktuvuk Pass, Atkasuk, Barrow, Nuiqsut, and Wainwright. Any substantial decrease in the population numbers of this herd would have a substantial impact on all five communities. If the decrease occurred during times of unsuccessful bowhead whaling, the effects would be devastating for Atkasuk, Barrow, Nuiqsut, and Wainwright. The additional development pressure envisioned by the cumulative-case scenario could exacerbate changes in abundance and productivity of caribou, and these changes could, in turn, adversely affect subsistence harvests.

Impacts to migratory waterfowl, especially brant, have the potential to negatively affect subsistence hunters in the Southwest Region of Alaska, especially in the Yukon-Kuskokwim Delta (Y-K Delta). According to the Alaska Department of Fish and Game Community Profile Database, communities in this area are some of the largest users of migratory waterfowl, especially during the springtime, with this resource comprising between 1.6% to as much as 6.2% of their annual yearly harvest, depending on the community. The analysis of impacts to migratory waterfowl indicate that while there is the potential for there to be negative effects as a result of both non-oil and gas and oil and gas activity, these effects are primarily dependent upon loss of habitat as a result of construction activity. Given the fact that brant are the primary species of concern for the Y-K Delta and comprise only one portion of their migratory bird harvest (at most 3% of total bird harvest, according to ADF&G), potential impacts as a result of this plan do not constitute a significant restriction of subsistence use for residents in that area of the state.

If a large discovery is made in the northwest or northern part of the planning area, it could make additional developments in the Northwest NPR-A or adjacent offshore areas more economically feasible, resulting in additional habitat and disturbance related impacts in the Northwest and Northeast NPR-A and in offshore areas adjacent to the Northeast and Northwest NPR-A. As development or disturbance increases, so does the potential for negative impacts to subsistence species and users. The offshore development and transport that is possible under the cumulative case could result in oil spills in the marine environment. Any oil spill that tainted, or was perceived to taint, whales or other marine mammals of importance to subsistence users would have a significant negative effect on those users. If such a spill affected migration patterns or distributions of any marine mammal used for subsistence, it would also have significant negative effect on subsistence users.

Effects on subsistence harvest patterns from natural gas development and production could occur from natural gas blowouts, noise and traffic disturbance, and construction activities under any of the alternatives. Subsistence hunters, who already tend to avoid oil field infrastructure, may be even more likely to avoid aboveground gas pipelines for fear of a blowout. Noise and disturbance activities due to the development of a gas field, especially to caribou, would be local (within 3-4 km of the pipeline corridor) but would persist for the life of the field.

From 1990 to 1997, the North Slope's permanent population grew at an annual rate of 2.7%, and Nuiqsut was the fastest growing village. For analysis purposes, however, the Supplement assumes that the population would grow for approximately the next 40 years at a rate of approximately 2% per year and then level off, with or without the development envisioned in the cumulative scenario discussed. The effects of such growth on competition for subsistence resources are difficult to predict, but it is possible that over time there would be increased competition among local subsistence users. It is unlikely that the transient workers associated

with oil and gas development would add to the competition, because they are ineligible for the subsistence priority under existing Federal regulations.

The effects of global climate change on marine mammals are unclear, but may result in more ship traffic in the Beaufort over a longer ice-free season, commercial fisheries in the Chukchi and Beaufort, and displacement and distributional changes if not population changes among marine mammals. Climate change is likely to have the greatest influence on marine mammal populations in and adjacent to the planning area; however, species resilience and resilience as well as feedback and interactions remain highly uncertain. Estimating how the incremental addition of direct human activities (disturbance, hunting and habitat alteration) remains speculative but climate change by itself is likely to have significant effects on the marine mammal community of the Beaufort and Chukchi Seas.

A.2.5.2 Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The NPRPA, as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in the NPR-A until authorized by Congress. In 1980, Congress granted that authorization and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska." BLM is undertaking this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of the NPRPA and FLPMA and other authorities cited elsewhere in this Supplemental IAP/EIS. Other lands managed by BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. State and Native Corporation Lands cannot be considered in a BLM plan, and other BLM lands outside of Alaska are not considered under the ANILCA as per BLM Policy.

A.2.5.3 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: 1) making more land in the Northeast NPR-A unavailable for oil and gas leasing, or 2) not allowing oil and gas activity to occur. However, neither of these alternatives would satisfy the underlying purpose of the IAP/EIS to make more lands available for leasing. The Secretary of the Interior has directed BLM to consider additional lands in the Northeast NPR-A to the extent it can be done in an environmentally sound manner. Reducing the number of acres available for energy development would contradict this direction, and would go against the President's stated National Energy Policy. Additionally, the 1998 Northeast IAP/EIS ROD allowed the BLM to enter into contracts with several oil companies, by leasing land for oil and gas exploration. All of these leases are still in effect. **Section 2.5, *Alternatives Considered but Eliminated from Detailed Analysis of the Supplemental IAP/EIS*** discusses other alternatives that were considered, but eliminated from detailed analysis.

A.2.5.4 Findings

The cumulative case as presented in this analysis, when taken in conjunction with all action alternatives, would result in a reasonably foreseeable and significant restriction of subsistence

use for the communities of Anaktuvuk Pass, Atqasuk, Barrow, Nuiqsut, and Wainwright, due to a decrease in resource abundance, significant alteration in the distribution of resources, and a significant restriction on the access of subsistence users. This finding requires a positive determination pursuant to the ANILCA § 810.

The distribution of caribou populations on the North Slope has been affected by Prudhoe Bay development, and access to subsistence resources has been compromised there. Although procedures will be in place to ensure that future development affects access as little as possible, it is still probable the total area available for subsistence purposes will be reduced. If a major marine oil spill were to occur in the future, it could significantly affect both populations and distributions of fish, and whales and other marine animals, causing significant restrictions to subsistence resources. Oil and gas infrastructure located in core caribou calving or insect-relief areas would result in the displacement, and possible reduction, of the herd. Population growth would result in a greater number of residents relying on local resources to meet their needs. These restrictions have the potential to affect Anaktuvuk Pass, Barrow, Wainwright, Atqasuk, and Nuiqsut.

A.3 Notice and Hearings

ANILCA § 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 § 810(a)(1) and (2). BLM provided notice in the Federal Register that it made positive findings pursuant to ANILCA § 810 that the cumulative case presented in the Supplemental IAP/EIS, when taken in conjunction with all action alternatives, met the “may significantly restrict” threshold. As a result, public hearings were held in the potentially affected communities of Anaktuvuk Pass, Atqasuk, Nuiqsut, Wainwright and Barrow. Notice of these hearings were in the Federal Register and by way of the local media, including the Arctic Sounder newspaper, and KBRW, the local Barrow radio station with coverage to all villages on the North Slope.

A.4 Subsistence Determinations Under ANILCA § 810(a)(3)(A), (B), and (C)

ANILCA § 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 §810(a)(1) and (2), and makes the three determinations required by ANILCA § 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. § 3120(a)(3)(A), (B), and (C)].

The BLM has found in this subsistence evaluation that the cumulative case considered in this Supplemental IAP/EIS would significantly restrict subsistence uses. Therefore, BLM undertook

the notice and hearing procedures required by ANILCA § 810 (a)(1) and (2) in conjunction with release of the Draft Supplemental IAP/EIS in order to solicit public comment from the potentially affected communities and subsistence users.

The determinations below satisfy the requirements of ANILCA § 810(a)(3)(A), (B), and (C).

A.4.1 Significant Restriction of Subsistence Use is Necessary, Consistent with Sound Management Principles for the Utilization of Public Lands.

The BLM has prepared this Supplemental IAP/EIS to fulfill the mandates of the President's energy policy and the responsibility to manage the National Petroleum Reserve – Alaska under the authority of two laws passed in 1976—The Naval Petroleum Reserves Production Act (NPRPA) and the Federal Land Policy and Management Act (FLPMA). The President's energy policy directs the Secretary of the Interior to “consider additional environmentally responsible oil and gas development, based on sound science and the best available technology.” The NPRPA authorizes and directs the Secretary of the Interior to “further explore, develop and operate” the National Petroleum Reserve-Alaska (10 U.S.C. § 7421). At the same time, the statute also requires that all oil and gas activities “undertaken pursuant to this section shall include or provide for such conditions, restrictions, and prohibitions as the Secretary deems necessary or appropriate to mitigate reasonably foreseeable and significantly adverse effects on the surface resources” of the National Petroleum Reserve – Alaska (42 U.S.C. § 6506a).

It was in furtherance of these objectives, together with other management guidance found in the NPRPA, FLPMA, NEPA, and ANILCA that this Supplemental IAP/EIS was undertaken. After considering a broad range of alternatives, a Preferred Alternative was developed that serves to make available additional lands for environmentally responsible oil and gas exploration and development after a ten-year deferral period, while incorporating protective measures that serve to minimize impacts to important subsistence resources and subsistence-use areas. The resulting Preferred Alternative considers the necessity for economically feasible development while providing effective protections to minimize any impacts on subsistence resources and uses. Under the Preferred Alternative, the performance-based stipulations and ROPs which accompany the Preferred Alternative serve as the primary mitigation measures to be used to reduce the impact of the proposed activity on subsistence resources.

The BLM has considered and balanced a variety of factors with regard to the proposed activity on public lands, including, most prominently, the comments received during the public meetings and hearings which stressed the importance of protecting essential caribou movement/migration corridors located to the east of Teshekpuk Lake. The BLM has determined that the significant restriction that may occur under the Preferred Alternative when considered together with all the possible impacts of the cumulative case, is necessary, consistent with sound management principles for the use of these public lands, and for BLM to fulfill the management goals for the Planning Area as guided by the statutory directives in the NPRPA, FLPMA, and other applicable laws.

A.4.2 The Proposed Activity will Involve the Minimal Amount of Public Lands Necessary to Accomplish the Purposes of such Use, Occupancy or Other Disposition.

The BLM has determined that the Preferred Alternative involves the minimal amount of public lands necessary to accomplish the purposes of the Preferred Alternative—which is to make additional lands available for oil and gas leasing in the Northeast National Petroleum Reserve –

Alaska. Alternatives that varied between opening no additional lands, some additional lands, or all lands to leasing were analyzed. The Preferred Alternative allows leasing after a ten-year deferral period in areas near Teshekpuk Lake and on the seven new large lease tracts north of the lake that have a limited amount of acres available for surface occupancy. In addition, Teshekpuk Lake and the islands contained within the lake would be unavailable for oil and gas leasing.

A.4.3 Reasonable Steps will be Taken to Minimize Adverse Impacts upon Subsistence Uses and Resources Resulting from such Actions.

When BLM began its NEPA scoping process for the current supplemental plan, it internally identified subsistence as one of the major issues to be addressed. The information found within the analysis of impacts to subsistence, including access, harvests, and traditional use patterns, as well as the results of public scoping meetings in the villages of the North Slope, meetings with the National Petroleum Reserve – Alaska Subsistence Advisory Panel, and consultation with tribal and local governments (especially the North Slope Borough, a cooperating agency), were used to craft the Preferred Alternative. In addition, the BLM took into consideration comments from villages and individuals of the North Slope during the ANILCA Subsistence Hearings. This information resulted in several modifications to the draft Alternative D, and resulted in the Preferred Alternative. These modifications include:

- Deferring leasing in 9% (430,000 acres) of the planning area for ten years after the signing of the Record of Decision;
- Making Teshekpuk Lake and its islands unavailable for oil and gas leasing, rather than deferring leasing in this area indefinitely;
- Allowing only up to 300 acres of total disturbance as a result of permanent oil and gas facilities in each of the seven new large lease tracts north of Teshekpuk Lake, which will be available after the ten-year deferral period should the existing NEPA analysis be adequate;
- Restricted Occupancy Zones—including approximately 240,000 acres north of Teshekpuk Lake, 45,000 acres east of the lake, 9,700 acres northwest of the lake, and 240,000 acres south of the lake—all of which serve to protect goose molting and caribou insect-relief habitat, caribou migration corridors, and caribou calving areas;
- Stipulations H-1 and H-2, which require additional consultation/notification efforts by the oil industry to potentially affected communities; and
- Stipulation K-5, which requires a 4-year study of caribou movements to be used in the design of permanent facilities; and Stipulations K-9 and K-10, which require workshops to be held to determine the best location of proposed pipeline corridors so as to minimize impacts to caribou.

Given these steps, as well as the other performance-based stipulations and ROPs the BLM has determined that the Preferred Alternative includes reasonable steps to minimize adverse impacts on subsistence uses and resources.