

APPENDIX U

**Bureau of Land Management
Alaska National Interest Lands Conservation Act
Section 810 Preliminary Evaluation**

APPENDIX U: ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT SECTION 810 PRELIMINARY EVALUATION

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Appendix U: ANILCA Section 810 Preliminary Evaluation

U.1 SUBSISTENCE EVALUATION FACTORS

Section 810(a) of the Alaska National Interest Lands Conservation Act (ANILCA), 16 United States Code 3120(a), 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 on subsistence under ANILCA Section 810(a) must be completed for the Alaska Liquefied Natural Gas (Alaska LNG) Pipeline Environmental Impact Statement (EIS). ANILCA requires that this evaluation include findings on three specific issues, as follows:

- The effect of use, occupancy, or disposition of public lands on subsistence uses and needs
- The availability of other lands for the purposes sought to be achieved
- Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes

Per Bureau of Land Management Instruction Memorandum No. AK-2011-008 (BLM 2011), three factors are considered when determining if a significant restriction of subsistence uses and needs may result from the proposed action, no action, or in the cumulative case, as follows:

- Reduction in the abundance of harvestable resources used for subsistence purposes
- Reduction in the availability of resources used for subsistence caused by alteration of their distribution, migration patterns, or location
- Legal or physical limitations on access of subsistence users to harvestable resources

Each alternative must be analyzed according to these criteria. BLM policy also requires that cumulative impacts be analyzed (BLM 2011). This approach helps the reader separate subsistence restrictions that could be caused by the proposed action from those that could be caused by past, present, and reasonably foreseeable activities in or near the Project area.

An alternative would be considered to significantly restrict subsistence uses if, after consideration of protective mitigation measures, it can be expected to substantially reduce the opportunity to use subsistence resources (BLM 2011). Substantial reductions are generally caused by large reductions in resource abundance, a major redistribution of resources, extensive interference with access, or major increases in the use of those resources by non-subsistence users.

If the analysis determines that the proposed action, alternatives, or the cumulative case may significantly restrict subsistence uses, the BLM is required to notify the State of Alaska and appropriate regional and local subsistence committees. BLM also must conduct ANILCA Section 810 hearings in the vicinity of potentially affected communities.

It is possible that the finding may be revised to “will not significantly restrict subsistence uses” based on changes to alternatives, new information, or new mitigation measures resulting from the hearings. If the significant restriction remains, the BLM may prohibit the action or finalize the evaluation by making the following determinations as required by ANILCA Section 810(a)(3):

- A significant restriction of subsistence uses would be necessary, consistent with sound management principles for the use of public lands

- The proposed activity would involve the minimal amount of public land necessary to accomplish the purpose of the use, occupancy, or other disposition
- Reasonable steps would be taken to minimize adverse effects on subsistence uses and resources resulting from such actions

The head of the appropriate Federal agency may then authorize use of the public lands.

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 a 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 (EPA, 2016.)

Section 4-4 of the Executive Order on Environmental Justice, 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 those consumption patterns.

Additional guidance is found in the CEQ document, Environmental Justice – Guidance under the National Environmental Policy Act, December, 1997.

U.2 ANILCA SECTION 810(A) EVALUATIONS AND FINDINGS

This ANILCA Section 810 Preliminary Evaluation is based on the information contained in the Alaska LNG Project draft EIS. Chapter 4, Environmental Analysis, describes areas and resources important for subsistence, and specific communities’ degree of dependence on various fish and wildlife resources.

The description of subsistence harvest patterns focuses on community profiles from five regions as presented in section 4.14, Subsistence, of the draft EIS. These five regions (North Slope, Yukon River, Tanana River, South Central, and Kenai Peninsula) were delineated based on shared common language and common harvest patterns. Any community within 30 miles of the Project and any community more than 30 miles from the Project area but with a subsistence use area within 30 miles of the Project area was identified as a subsistence community for this analysis. The regions and corresponding communities are presented in table 1.

Region	Community
North Slope	Utqiagvik (Barrow), Nuiqsut, Kaktovik, Anaktuvuk Pass
Yukon River	Evansville, Alatna, Allakaket, Stevens Village, Rampart, Wiseman, Coldfoot, Bettles
Tanana River	Tanana, Manley Hot Springs, Minto, Nenana, Four Mile Road CDP, Anderson, Ferry, Healy, Denali Park CDP
South-Central	Cantwell, Chase, Talkeetna, Trapper Creek, Skwentna, Alexander Creek/Susitna, Beluga, Tyonek
Kenai Peninsula	Nikiski, Seldovia, Port Graham, Nanwalek

Table 1. Subsistence regions and study communities.

U.2.1 Evaluation and Finding for the No Action Alternative

The Project would not be completed under the no action alternative. Current management actions and resource trends would continue in the vicinity of the proposed project area.

U.2.1.1 Evaluation of the effect of use, occupancy, or disposition on subsistence uses and needs

Existing impacts on subsistence would continue, and would not significantly reduce or limit the abundance, availability, or access to subsistence resources for communities within the North Slope, Yukon River, Tanana River, South-Central, or Kenai Peninsula regions.

U.2.1.2 Evaluation of the availability of other lands for the purpose sought to be achieved

The no action alternative does not propose the disposition or use of public lands needed for subsistence purposes; therefore, evaluating the availability of other lands is not applicable.

U.2.1.3 Evaluation of other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence

The no action alternative would eliminate the use and occupancy of public lands needed for subsistence purposes. The proposed action alternative would not reduce or eliminate the use of public lands needed for subsistence when compared to the no action alternative. Additional alternatives were reviewed in Chapter 3 of the draft EIS, but none were identified that could provide a significant environmental advantage over the Project.

U.2.1.4 Findings

The no action alternative will not result in a significant restriction in subsistence uses. A positive determination pursuant to ANILCA Section 810 is not required.

U.2.2 Evaluation and Finding for the Proposed Action

The Alaska LNG Project (Project) would involve the construction and operation of gas treatment, mainline (pipeline), and liquefaction facilities. The Alaska Gasline Development Corporation (AGDC) proposes to construct and commission the Project in two phases over about 8 years. Phase 1 would be completed over about 6 years and include construction related to the Liquefaction and Mainline Facilities. The second phase would install the remaining Project components needed for full production.

The 806.6 mile pipeline route would start at the gas treatment plant (GTP) and generally follow the existing Trans Alaska Pipeline System (TAPS) crude oil pipeline and adjacent highways south to Livengood, Alaska. From Livengood, the route would generally head south-southwest to Trapper Creek following the Parks and Beluga Highways, and then turns south-southeast around Viapan Lake. It would then cross the Cook Inlet near Shorty Creek to Boulder Point on the Kenai Peninsula. The permanent Mainline Facilities include eight compressor stations, one heater station, mainline valves (MLVs), and permanent access roads.

Constructing the Project would require the use of about 35,405 acres of land. Following construction, AGDC would maintain about 8,586 acres for Project operation.

U.2.2.1 Evaluation of the effect of use, occupancy, or disposition on subsistence uses and needs

The preliminary evaluation summarizes potential impacts on subsistence resources (wildlife, fish and benthic invertebrates, and other resources) for communities within the North Slope, Yukon River, Tanana River, South-Central, and Kenai Peninsula regions as well as impacts on resource access.

North Slope

The North Slope communities analyzed in the draft EIS section 4.14, Subsistence, include Utqiagvik, Nuiqsut, Kaktovik, and Anaktuvuk Pass (figure 4.14.3-1). Section 4.14 describes potential impacts to subsistence that could occur during construction, operations, or both phases of the project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,
 - Changes in migratory behavior and/or local movements of marine mammals due to noise and/or vessel traffic,
 - Changes in migratory behavior and/or local movements of caribou due to construction activities and the maintained right-of-way,
- Impacts to access to traditional subsistence use areas due to construction-related activities and vessel traffic, and
- Increased competition with non-local hunters due to unauthorized use of access roads.

These potential impacts to wildlife, fish, other resources, and potential impacts to subsistence user access, are discussed below.

Wildlife

Displacement of wildlife resource due to disturbance and/or habitat loss could affect the availability and abundance of wildlife resources for Utqiagvik, Nuiqsut, and Anaktuvuk Pass. These resources include marine mammals (bowhead whale, ringed and bearded seals, and Pacific walrus), caribou, and upland birds.

Impacts to the availability of marine mammals could be moderate to major but would be effectively mitigated. Marine mammals could be displaced from traditional use areas and travel routes due to noise and shipping traffic. Displacement of marine mammals would be mitigated and minimized during critical time periods by coordinating with local communities and whaling associations to identify areas within which construction activities should be avoided (see AKLNG draft EIS section 4.14.2.6, General Impact Assessment, page 4.18). As a result, impacts to the availability of marine mammals for subsistence use are expected to be minor and temporary.

Impacts to the availability of caribou could be moderate but would be effectively mitigated. Caribou movements could be locally disrupted due to the construction and presence of the right-of-way. Current best management practices for development on the North Slope include construction methods that allow for the safe, unimpeded passage of caribou and other large mammals across linear infrastructure. Therefore, while caribou movements could be locally impacted, these impacts are expected to be minor

and temporary, and will not prevent caribou from accessing critical habitat or areas within which they are traditionally hunted.

Impacts to the availability of upland birds are expected to be minor. While local displacement may occur, residents of Utquigvik, Nuiqsut, and Anaktuvuk Pass harvest these resources in a much broader area beyond that within and adjacent to the pipeline right-of-way and will not be adversely impacted.

Impacts to the abundance and availability of terrestrial wildlife species due to increased competition with non-local hunters could be moderate for residents of Anaktuvuk Pass. Proposed mitigation measures and best management practices such as prohibiting employees from engaging in hunting and fishing and blocking right-of-way access points will deter the majority of hunters. Residual impacts would be minor, and would be sufficiently addressed by adapting State and Federal hunting regulations to changing hunting pressure and population dynamics.

Fish

Utqiagvik non-salmon fish use areas are crossed by the Project and could be temporarily affected by the modifications at West Dock, including changes to a fish passage area. Construction of the pipeline, PTTL (Point Thomson Transmission Line), and GTP would occur over winter seasons and would therefore have limited impacts on resource availability of non-salmon fish for Nuiqsut harvesters. Kaktovik and Anaktuvuk Pass subsistence use areas are predominantly located on the periphery of the project area.

Construction and operation are anticipated to have a limited and short term effect on resource availability, and cost and effort to harvest fish resources for these users. Neither abundance nor availability of fish and benthic invertebrates in the North Slope region are likely to be reduced or limited to the extent that subsistence uses would be significantly impaired.

Other Resources

Other resources such as wood, water, or berries would not be affected by the proposed action.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures proposed as part of this project would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

Yukon River

The Yukon River communities analyzed in the draft EIS section 4.14, Subsistence, include Evansville, Alatna, Allakaket, Stevens Village, Rampart, Wiseman, Coldfoot, and Bettles. Section 4.14 describes potential impacts to subsistence that could occur during construction, operations, or both phases of the project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,

- Permanent habitat conversion in berry harvesting areas,
- Impacts to access to traditional subsistence use areas due to construction-related activities, and
- Increased competition with non-local hunters due to unauthorized use of access roads.

These potential impacts to wildlife, fish, other resources, and potential impacts to subsistence user access, are discussed below.

Wildlife

Displacement of wildlife resource due to disturbance and/or habitat loss could affect the availability and abundance of wildlife resources for residents of Evansville, Alatna, Allakaket, Stevens Village, Rampart, Wiseman, Coldfoot, and Bettles. These resources include large mammals (moose, caribou, Dall sheep, and bear), furbearers, small game (Snowshoe hare, grouse, and ptarmigan), and waterfowl.

Impacts to the availability of large mammals could be moderate but would be effectively mitigated. Caribou movements could be locally disrupted due to the construction and presence of the right-of-way. Current best management practices for development include construction methods that allow for the safe, unimpeded passage of large mammals across linear infrastructure. Therefore, while movements could be locally impacted, these impacts are expected to be minor and temporary, and will not prevent caribou and other large mammals from accessing critical habitat or areas within which they are traditionally hunted.

Impacts to the availability of other wildlife, including furbearers, small game and waterfowl are expected to be minor. While local displacement may occur, residents of the Yukon River region harvest these resources in a much broader area and will not be adversely impacted.

Impacts to the abundance and availability of terrestrial wildlife species due to increased competition with non-local hunters could be moderate for residents of Stevens Village and Wiseman. Proposed mitigation measures and best management practices such as prohibiting employees from engaging in hunting and fishing and blocking right-of-way access points will deter the majority of hunters.

Fish

Summer is an important time for harvesting fish for residents of the Yukon River region. Harvesting salmon in the Yukon and Koyukuk River watersheds and non-salmon species in rivers and lakes is important in Allakaket, Alatna, Rampart, Stevens Village, Bettles, and Evansville. Wiseman harvest from local waterbodies is composed primarily of non-salmon fish.

Construction activities along the pipeline would overlap with non-salmon fish at stream crossings. As discussed in section 4.14, Subsistence, construction could have a short term impact on fish distribution and habitat and affect access to resources along the Dalton Highway.

Construction activities could also cause downstream effects on fish and their habitat. However, impacts to subsistence use and harvest during construction and operation would be minimal for downstream communities due to the distance of the use areas from the Project. Construction impacts to fish resources, habitat, and users of the Yukon River would be minimized due to the crossing of the Yukon River accomplished through use of the buried trenchless construction method.

Construction and operation are anticipated to have a limited and short term effect on resource availability, and cost and effort to harvest fish resources for these users. Neither abundance nor availability of fish and benthic invertebrates in the Yukon River region are likely to be reduced or limited to the extent that subsistence uses would be significantly impaired.

Other Resources

Impacts to the abundance of berries would be negligible to minor. Vegetation, including blueberry, cloudberry, and other species traditionally collected during the late summer and early fall would be impacted within the right-of-way footprint. Traditional berry collecting areas for Stevens Village and Rampart overlap with the right-of-way and could be impacted. Collection of these resources occur within a large area, and areas closer to these communities are likely the most important and would not be affected.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures proposed as part of this project would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

Tanana River

The Tanana River communities analyzed in the draft EIS section 4.14, Subsistence, include Tanana, Manley Hot Springs, Minto, Nenana, Four Mile Road, Anderson, Ferry, Healy, and Denali Park CDP. Section 4.14 describes potential impacts to subsistence that could occur during construction, operations, or both phases of the project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,
- Permanent habitat conversion in berry harvesting areas,
- Impacts to access to traditional subsistence use areas due to construction-related activities, and
- Increased competition with non-local hunters due to unauthorized use of access roads.

For the Tanana River region, these potential impacts to wildlife, fish, other resources, as well as potential impacts to subsistence user access are discussed below.

Wildlife

Impacts to wildlife resource abundance and availability due to displacement of resources, vegetation disturbance, and increased competition with non-local hunters would be similar to those described under the North Slope and Yukon River sections. Impacts would be minor in intensity and duration. These minor impacts are not anticipated to significantly limit or reduce wildlife availability or abundance for subsistence use.

Fish

Summer is a key time for harvesting fish in the Tanana River region. Fishing begins in June and continues through the fall as salmon migrate through the region's watersheds. Non-salmon freshwater fish species harvested during the summer include Arctic grayling, whitefish, sheefish, trout, char, and burbot.

Construction could have a short term impact on access to, and availability of, resources as a result of habitat loss, increased competition from non-local harvesters, increased traffic, blocked harvester access to subsistence use areas, and additional cost and effort to harvest these resources. Competition for resources may continue during Project operation in portions of the region.

Construction activities could also cause downstream effects on fish and their habitat. However, impacts to subsistence use and harvest during construction and operation would be minimal for the downstream communities of Tanana and Manley Hot Springs due to the distance of the use areas from the Project. Downstream effects can also be mitigated at some locations through the timing of construction.

Construction and operation are anticipated to have a limited and short term effect on resource availability, and cost and effort to harvest fish resources for these users. Neither abundance nor availability of fish and benthic invertebrates in the Tanana River region are likely to be reduced or limited to the extent that subsistence uses would be significantly impaired.

Other Resources

Impacts to the abundance of berries would be negligible to minor based on magnitude and duration. Vegetation, including blueberry, cloudberry, and other species traditionally collected during the late summer and early fall would be impacted within the right-of-way footprint. Traditional berry collecting areas for Nenana, Ferry, Healy, and Denali Park CDP overlap with the right-of-way and could be impacted. Collection of these resources occur within a large area, and areas closer to these communities are likely the most important. The identified negligible to minor impacts are not anticipated to significantly reduce or limit the availability or abundance of other resources.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures proposed as part of this project would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

South-Central

The Yukon River communities analyzed in the draft EIS section 4.14, Subsistence, include Cantwell, Chase, Talkeetna, Trapper Creek, Skwentna, Alexander Creek and Susitna, Beluga, and Tyonek. Section 4.14 describes potential impacts to subsistence that could occur during construction, operations, or both phases of the project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,
- Permanent habitat conversion in berry harvesting areas,

- Impacts to access to traditional subsistence use areas due to construction-related activities, and
- Increased competition with non-local hunters due to unauthorized use of access roads.

For the South-Central region, these potential impacts to wildlife, fish and benthic invertebrates, other resources, as well as potential impacts to subsistence user access are discussed below.

Wildlife

Impacts to wildlife resource abundance and availability due to displacement of resources, vegetation disturbance, and increased competition with non-local hunters would be similar to those described previously. Impacts would be minor.

Fish

At a regional level, salmon was identified as the third most important resource. Communities harvest salmon from a number of the rivers crossed by the Project. Use areas for some communities are concentrated along the existing highway corridor while some residents may also use coastal areas to harvest marine invertebrates.

Construction could have a short term impact on access to, and availability of, resources as a result of habitat loss, increased competition from non-local harvesters, increased traffic, blocked harvester access to subsistence use areas, and additional cost and effort to harvest these resources. Competition for resources may continue during Project operation in portions of the region.

Construction and operation are anticipated to have a limited and short term effect on resource availability, and cost and effort to harvest fish resources for these users. Neither abundance nor availability of fish and benthic invertebrates in the South Central region are likely to be reduced or limited to the extent that subsistence uses would be significantly impaired.

Other Resources

Impacts to the abundance of berries would be negligible to minor based on the extent of the impact within subsistence berry picking areas. Vegetation, including blueberry, cloudberry, and other species traditionally collected during the late summer and early fall would be impacted within the right-of-way footprint. Traditional berry collecting areas for Cantwell, Chase, Beluga, and Tyonek overlap with the right-of-way and could be impacted. Collection of these resources occur within a large area, and areas closer to these communities are likely the most important. The identified negligible to minor impacts are not anticipated to significantly reduce or limit the availability or abundance of other resources.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures proposed as part of this project would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

Kenai Peninsula

The Kenai Peninsula communities analyzed in the draft EIS section 4.14, Subsistence, include Nikiski, Seldovia, Port Graham, and Nanwalek. Several Kenai Peninsula region study communities (including Nikiski) are federally designated as non-rural communities and are located within a state non-subsistence area. As a result, Nikiski is not included in this analysis.

Section 4.14 describes potential impacts to subsistence that could occur during construction, operations, or both phases of the project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,
- Impacts to access to traditional subsistence use areas due to construction-related activities, and
- Increased competition with non-local hunters due to unauthorized use of access roads.

Wildlife

Impacts to wildlife resource abundance and availability due to displacement of resources and increased competition with non-local hunters would be similar to those described previously. Impacts would be minor.

Fish

Data from communities in this region indicate that salmon and non-salmon fish are the most important resource categories as measured as a proportion of the total harvest. Subsistence users harvest all five species of Pacific salmon. Harvest occurs in marine and freshwaters. A variety of marine and freshwater non-salmon fish and marine invertebrates are also harvested.

Project construction activity and operation of the pipeline and Liquefaction Facility could impact subsistence users by reducing resource availability and access while increasing harvest cost and effort and potential resource competition. Construction would also require additional shipments during the summer shipping season. The additional traffic would occur in an already established shipping lane. The Project shipping route in Cook Inlet would directly overlap Nanwalek subsistence use areas for non-salmon fish.

Construction and operation are anticipated to have a limited and/or short term effect on resource availability, and cost and effort to harvest fish resources for these users. Neither abundance nor availability of fish and benthic invertebrates in the Kenai Peninsula region are likely to be reduced or limited to the extent that subsistence uses would be significantly impaired.

Other Resources

Impacts to the abundance of berries would be negligible to minor based on the extent of the impact within subsistence berry picking areas. Vegetation, including blueberry, cloudberry, and other species traditionally collected during the late summer and early fall would be impacted within the right-of-way footprint. Collection of these resources occur within a large area, and areas closer to these communities are likely the most important. The identified negligible to minor impacts are not anticipated to significantly reduce or limit the availability or abundance of other resources.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures proposed as part of this project would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

U.2.2.2 Evaluation of the availability of other lands for the purpose sought to be achieved

Other lands are available for pipeline construction. Relatively minor variations in the route and the location of processing facilities would be feasible. However, the proposed pipeline route would minimize total pipeline length, reduce the amount of challenging terrain, avoid and/or minimize impacts to existing right-of-ways (and maximize co-location of right-of-ways where desirable), and avoid parks, preserves, refuges, and wilderness areas.

U.2.2.3 Evaluation of other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence

The no action alternative would eliminate the use and occupancy of public lands needed for subsistence purposes. The proposed action alternative would not reduce or eliminate the use of public lands needed for subsistence when compared to the no action alternative. Additional alternatives were reviewed in Chapter 3 of the draft EIS, but none were identified that could provide a significant environmental advantage over the Project.

U.2.2.4 Findings

This evaluation concludes that the proposed action will not result in a significant restriction in subsistence uses for the communities listed in table 1. A positive determination pursuant to ANILCA Section 810 is not required.

U.2.3 Evaluation and Finding for the Cumulative Case

Cumulative impacts to subsistence are described in the draft EIS section 4.19.4.14. The goal of the cumulative case analysis presented in Chapter 4 is to evaluate the incremental impact of the actions considered in the draft EIS in conjunction with all past, present, and reasonably foreseeable future activities in or near the Project area. The geographic area within which cumulative effects were considered includes habitat and the migratory range for subsistence resources such as caribou, salmon and non-salmon fish, migratory birds, and the traditional subsistence use areas for communities affected by the Project. Past, present, and reasonably foreseeable future actions that could cumulatively affect resources within these geographic areas are listed in appendix X-1.

*U.2.3.1 Evaluation of the effect of use, occupancy, or disposition on subsistence uses and needs**Wildlife*

Oil and gas activities on state and federal lands near the Project have deterred subsistence hunters from using traditional caribou hunting areas (BLM 2013, North Slope Borough 2014, and National Research Council 2003). The projects listed in appendix X-1 that are between the Colville and Canning Rivers

could increase the amount of activity within the Central Arctic Herd caribou range, and could expose a large number of the Teshekpuk Caribou Herd and Western Arctic Herd caribou to development in their summer and winter grounds and during migration. Continued expansion of industrial activity could displace caribou from their normal migratory routes, increase the area considered to be undesirable by subsistence users, and require subsistence users to travel further to harvest subsistence foods at a greater cost in terms of time, fuel, wear and tear on equipment, and harvester's lost wages and increased safety risks.

While direct habitat loss from cumulative oil and gas development near the Project would affect only a small proportion of the total area used by caribou, functional habitat loss could result from long-term displacement of caribou from the vicinity of the applicable projects listed in appendix X-1 and could encompass a much larger area resulting in reduced availability of caribou. AGDC would implement mitigation measures, including consultation with the potentially affected subsistence communities, to prevent conflicts with subsistence hunting. Nonetheless, the cumulative effects of the proposed action in combination with other past, present, and reasonably foreseeable activities on the North Slope may result in a significant restriction of subsistence use for the communities of Nuiqsut, Kaktovik, Utqiagvik, and Anaktuvuk Pass due to a potential decrease in the availability of caribou.

Cumulative effects on marine mammals such as bowhead whales could result from offshore activities on the North Slope. If activities associated with the proposed action occur concurrently and within proximity to other applicable projects listed in appendix X-1, impacts on marine mammals would likely be exacerbated and could result in changes in movement and migratory patterns, shifts in foraging behavior, or reduction in access to productive forage areas. These behavioral changes would likely require subsistence users in Nuiqsut, Kaktovik, and Utqiagvik to travel further to harvest bowhead whales at a greater cost in terms of time, fuel, and wear and tear on equipment. AGDC would coordinate with the AEW (Alaska Eskimo Whaling Commission) to work under a Conflict Avoidance Agreement to decrease impacts on bowheads and subsistence hunters. This measure would sufficiently minimize cumulative impacts on bowhead whales because communication under this agreement would enable AGDC to plan offshore activities and transportation schedules so that they do not conflict with major migration times or subsistence hunting. These agreements have generally been successful. Residual impacts would still exist, but would be minor based on magnitude and extent.

Section 4.19.4.14 of the draft EIS cites increased traffic along the Dalton and Parks highways and increased competition for wildlife resources as additional sources of potential cumulative impacts to subsistence. Current best management practices on the North Slope include policies that prevent employees and personnel from hunting or fishing while stationed at camps or other work facilities. This practice would continue under the proposed action. Therefore, wildlife resource abundance will not be significantly reduced or limited under the cumulative case.

Fish

Cumulative impacts on fisheries and benthic invertebrate resources are described in the Aquatics section (section 4.19.4.7) of the draft EIS. Potential impacts include degradation of habitat and direct mortality and alteration of population abundance through disruption of habitat, decreased health, and indirect mortality resulting from changes to water and sediment quality. The magnitude of cumulative impacts on fisheries and benthic invertebrate resources were characterized as less than significant.

With regards to subsistence use of fish and benthic invertebrates, development activities and their subsequent impacts could result in temporary disruptions within subsistence use areas, and cause short term decreases in aquatic subsistence resource availability, harvest rates, and user access. Effort required to participate in subsistence activities could increase during the development phase of the Project and other applicable actions listed in appendix X-1. Past, present, and reasonably foreseeable actions will not significantly reduce abundance or limit the availability of aquatic subsistence resources or the continued ability of subsistence users to access resources.

Other Resources

Other resources such as wood, water, or berries would be locally affected by the proposed action and other projects described in appendix X-1. However, collection of these resources occurs across a wide area. The abundance of these other resources would not be significantly reduced or limited under the cumulative case.

Access

Impacts on the ability of subsistence users to access traditional subsistence use areas could be moderate, but would be effectively mitigated. The mitigation measures would require that local residents be consulted prior to and during construction so that access to important subsistence use areas would not be blocked or prohibited. Therefore, impacts to access would be negligible to minor.

U.2.3.2 Evaluation of the availability of other lands for the purpose sought to be achieved

Evaluation of the availability of other lands is identical to that described under the proposed action.

U.2.3.3 Evaluation of other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence

Evaluation of other alternatives is identical to that described under the proposed action.

U.2.3.4 Findings

This evaluation concludes that the cumulative case, when taken in conjunction with the proposed action, may result in a significant restriction to subsistence uses for the communities of Nuiqsut, Kaktovik, Utqiagvik, and Anaktuvuk Pass due to potential decline in the availability of caribou for subsistence use. A positive determination pursuant to ANILCA Section 810 is required.

U.3 NOTICE AND HEARINGS

ANILCA Section 810(a) provides that there shall be no “withdrawal, reservation, lease, permit, or other use, occupancy, or disposition of the public lands which would significantly restrict subsistence uses,” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA Section 810(a)(1) and (2). The BLM will provide notice in the *Federal Register* that it made positive findings pursuant to ANILCA Section 810 that the cumulative case presented in the draft EIS met the “may significantly restrict” threshold. As a result, public hearings will be held in the potentially affected communities of Nuiqsut, Kaktovik, Utqiagvik, and Anaktuvuk Pass. The hearings in Nuiqsut and Utqiagvik will be held in conjunction with public comment meetings for the draft EIS. Notice of all

hearings will be provided in the *Federal Register* and in local media, including the *Arctic Sounder* and KBRW, the Utquigvik radio station with coverage to all villages on the North Slope.

U.4 SUBSISTENCE DETERMINATIONS UNDER THE ANILCA SECTION 810(A)(3)(A), (B), AND (C)

ANILCA Section 810(a) provides that there would be no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses,” until the federal agency gives the required notice and holds a hearing, in accordance with ANILCA Section 810(a)(1) and (2), and makes the following three determinations required by ANILCA Section 810(a)(3)(A), (B), and (C): 1) that such a significant restriction of subsistence use is necessary, consistent with sound management principles for the use of the public lands; 2) that the proposed activity would 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 would be taken to minimize adverse impacts on subsistence uses and resources resulting from such actions (16 USC 3120(a)(3)(A), (B), and (C)).

The BLM has found in this preliminary evaluation that the cumulative case may significantly restrict subsistence uses. This is in agreement with the findings presented in the draft EIS cumulative impacts analysis, which conclude that the cumulative effects of the Alaska LNG Project in combination with other projects on the North Slope could disrupt the distribution of caribou on the North Slope and could negatively affect subsistence harvests of caribou by Nuiqsut, Kaktovik, Utqiagvik, and Anaktuvuk Pass. The BLM will undertake the notice and hearing procedures required by ANILCA Section 810 (a)(1) and (2), in conjunction with the release of the draft EIS in order to solicit public comment from these potentially affected communities.

The determination that the requirements of the ANILCA Section 810(a)(3)(A), (B), and (C) have been met will be analyzed in the Final ANILCA Section 810 Evaluation. The Final Evaluation will integrate input voiced during the hearings by the residents of potentially affected communities.

U.5 REFERENCES

BLM (U.S. Department of Interior Bureau of Land Management). 2012. National Petroleum Reserve – Alaska Integrated Activity Plan/Final Environmental Impact Statement. Bureau of Land Management, Alaska State Office.

BLM (U.S. Department of the Interior Bureau of Land Management). 2011. Bureau of Land Management instructions and policy for compliance with Section 810 of the Alaska National Interest Lands Conservation Act. Instruction Memorandum No. AK-2011-008. Internet website: <https://www.blm.gov/policy/im-ak-2011-008>.

NRC (National Research Council). 2003. Cumulative Environmental Effects of Oil and Gas Activities on Alaska’s North Slope. Washington, DC: National Academies Press.