

APPENDIX U

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

APPENDIX U: ANILCA Section 810 Final Evaluation**Table of Contents**

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Acronyms

AEWC	Alaska Eskimo Whaling Commission
AGDC	Alaska Gasline Development Corporation
Alaska LNG	Alaska Liquefied Natural Gas
ANILCA	Alaska National Interest Lands Conservation Act
BLM	United States Bureau of Land Management
BMP	Best Management Practice
CDP	Census Designated Place
DNPP	Denali National Park & Preserve
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
LNG	Liquefied Natural Gas
NTP	Notice to Proceed
Project	Alaska LNG Project
SPOC	Subsistence Plan of Cooperation
TAPS	Trans Alaska Pipeline System
USC	United States Code
WAIP	Wildlife Avoidance and Interaction Plan

Appendix U: ANILCA Section 810 Final Evaluation

U.1 SUBSISTENCE EVALUATION FACTORS

The United States Bureau of Land Management (BLM) has prepared this analysis on behalf of the Department of Interior, to fulfill the departmental requirements pursuant to Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). Section 810(a) of the Alaska National Interest Lands Conservation Act, 16 United States Code (USC) 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) Project Environmental Impact Statement (EIS). ANILCA requires that this evaluation include findings on three specific issues:

- 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 BLM 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 Alaska LNG Project (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 head of the federal agency having primary jurisdiction over the federal public lands in question is required to notify the State of Alaska and appropriate regional and local subsistence committees. The head of such federal agency 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 head of the federal agency having primary jurisdiction over the federal

public lands in question 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 Council on Environmental Quality 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 evaluation is based on the information contained in the Alaska LNG Project Final 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 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.

Table 1. Subsistence Regions and Study Communities

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

CDP = Census Designated Place

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 not require that lands used for subsistence purposes be used for the proposed pipeline and its construction. Conversely, the proposed action alternative would require that lands used for subsistence purposes be used for the proposed pipeline and its construction. Additional alternatives were reviewed in Chapter 3 of the EIS, but none were identified that would significantly reduce the development footprint in subsistence use areas.

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 Project would involve the construction and operation of Gas Treatment Facilities, 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 806.9 mile pipeline route would start at the Gas Treatment Plant 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, and permanent access roads.

After publication of the Draft EIS, the proponent amended their application with the Federal Energy Regulatory Commission (FERC) to select the Denali National Park & Preserve (DNPP) alternative as their preferred route. The National Park Service is processing an application for a permit to construct and operate a buried natural gas pipeline through about 6.1 miles of the DNPP. Under provisions of the Denali Park Improvement Act (Public Law 113-33, as amended by Public Law 116-9), the Secretary of the Interior may issue a right-of-way permit for a high-pressure natural gas transmission pipeline in non-wilderness areas within the DNPP boundary. This route change is part of the proposed action.

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 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 Section 4.14, Subsistence, of the EIS include Utqiagvik, Nuiqsut, Kaktovik, and Anaktuvuk Pass (Figure 4.14.3-1). Section 4.14 describes potential impacts on subsistence that could occur during construction, operation, 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 on 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 on wildlife, fish, and other resources, and potential impacts on subsistence user access are discussed below.

Wildlife

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

Impacts on the availability of marine mammals could be moderate to major but would be effectively mitigated by best management practices (BMPs) and mitigation measures. Marine mammals could be displaced from traditional use areas and travel routes due to noise and shipping traffic. In accordance with the Subsistence Plan of Cooperation (SPOC), 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 Section 4.14.2.6, General Impact Assessment, of the final EIS). As a result, impacts on the availability of marine mammals for subsistence use are expected to be minor and temporary.

Impacts on the availability of caribou could be moderate but would be effectively mitigated through the implementation of BMPs and mitigation measures, including siting proposed infrastructure within the Prudhoe Bay Unit designated by the Alaska Department of Natural Resources, Division of Oil and Gas. Little subsistence harvest occurs within this area. Important subsistence use areas, such as the insect relief habitat on the coast, would not be affected. Caribou movements could be locally disrupted due to the construction and presence of the right-of-way. Literature-supported BMPs 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. These BMPs are described in the Wildlife Avoidance and Interaction Plan (WAIP), Table 1. Therefore, while caribou movements could be locally affected, 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 on 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 affected.

Impacts on 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 BMPs included in the WAIP, 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 the West Dock Causeway, including changes to a fish passage area. Construction of the pipeline, Point Thomson Gas Transmission Line, and Gas Treatment Plant 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 in the SPOC 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. Impacts on access would be negligible to minor.

Yukon River

The Yukon River communities analyzed in Section 4.14, Subsistence, of the EIS include Evansville, Alatna, Allakaket, Stevens Village, Rampart, Wiseman, Coldfoot, and Bettles. Section 4.14 describes potential impacts on 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 on 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 on wildlife, fish, other resources, and potential impacts on subsistence user access, are discussed below.

Wildlife

Displacement of wildlife resources 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 on the availability of caribou and 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. Literature-supported BMPs 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. These BMPs are described in the WAIP. While movements could be locally affected, 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 on 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 affected.

Impacts on 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 BMPs 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 Beaver, 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 on 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 on 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 horizontal directional drilling 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 on 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 affected within the right-of-way footprint. Traditional berry collecting areas for Stevens Village and Rampart overlap with the right-of-way and could be affected. 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 in the SPOC 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. Impacts on access would be negligible to minor.

Tanana River

The Tanana River communities analyzed in Section 4.14, Subsistence, of the EIS include Tanana, Manley Hot Springs, Minto, Nenana, Four Mile Road, Anderson, Ferry, Healy, and Denali Park Census

Designated Place (CDP). Section 4.14 describes potential impacts on subsistence that could occur during construction, operation, 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 on 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 on wildlife, fish, and other resources, as well as potential impacts on subsistence user access are discussed below.

Wildlife

Impacts on 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 on 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.

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 on 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 affected 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 affected. 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 in the SPOC 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 on access would be negligible to minor.

South-Central

The Yukon River communities analyzed in Section 4.14, Subsistence, of the EIS include Cantwell, Chase, Talkeetna, Trapper Creek, Skwentna, Alexander Creek and Susitna, Beluga, and Tyonek. Section 4.14 describes potential impacts on subsistence that could occur during construction, operation, 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 on 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 on wildlife, fish and benthic invertebrates, and other resources, as well as potential impacts on subsistence user access are discussed below.

Wildlife

Impacts on 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 on 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 affected 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 affected. 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 in the SPOC 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 on access would be negligible to minor.

Kenai Peninsula

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

Section 4.14 describes potential impacts on subsistence that could occur during construction, operation, or both phases of the Project. These impacts include:

- Displacement of resources due to disturbance and/or habitat loss,
- Impacts on 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 on 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 Mainline Pipeline and Liquefaction Facilities could affect 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 (see Section 4.12.2.3 of the EIS). 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 on 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 affected 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 in the SPOC 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 on 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 on existing rights-of-way (and maximize co-location of rights-of-way where desirable). It would be co-located with existing infrastructure in the utility corridor, thereby reducing potential environmental or subsistence impacts in undisturbed 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 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 on subsistence are described in Section 4.19.4.14 of the EIS. The goal of the cumulative case analysis presented in Chapter 4 is to evaluate the incremental impact of the actions considered in the 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 W, Table W-1 of the EIS.

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, 2012; North Slope Borough, 2014; and National Research Council, 2003). The projects listed in Appendix W-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 farther 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 caribou displacement from the vicinity of the applicable projects listed in Table W-1 and could encompass a much larger area resulting in reduced caribou availability. 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 caribou availability. The BLM received comments on the Preliminary Evaluation finding suggesting that potential impacts on caribou from reasonably foreseeable development would be mitigated such that there would be no significant restriction. The BLM only considered stipulations and or protective measures included as part of this Project. Future mitigation measures beyond those specifically identified in the Project documents were not considered in the ANILCA 810 analysis.

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 Table W-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 farther to harvest bowhead whales at a greater cost in terms of time, fuel, and wear and tear on equipment. AGDC would coordinate with the Alaska Eskimo Whaling Commission to work under a Conflict Avoidance Agreement to decrease impacts on bowhead whales and subsistence hunters in accordance with the SPOC. 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 that 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 EIS cites increased traffic along the Dalton and Parks Highways and increased competition for wildlife resources as additional sources of potential cumulative impacts on subsistence. The WAIP includes the BMP that prevents employees and personnel from hunting or fishing while stationed at camps or other work facilities. 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 Resources section (Section 4.19.4.7) of the EIS. Potential impacts include habitat degradation 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.

Regarding 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 Table W-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 Table W-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 in the SPOC 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 on 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 provided 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 were held in the potentially affected communities of Nuiqsut, Kaktovik, Utqiagvik, and Kaktovik. Notice of these hearings was provided in the *Federal Register* and in local media, including the *Arctic Sounder* and KBRW, the Utqiagvik 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 subsistence evaluation that the cumulative case may significantly restrict subsistence uses. The BLM undertook the notice and hearing procedures required by ANILCA Section 810 (a)(1) and (2), in conjunction with releasing the Draft EIS in order to solicit public comment from the potentially affected communities of Nuiqsut, Kaktovik, Utqiagvik, and Anaktuvuk Pass.

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

U.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 analysis on behalf of the Department of Interior, to fulfill the departmental requirements pursuant to Section 810 of the Alaska National Interest Lands Conservation Act. The Alaska LNG EIS fulfills, in part, the Secretary of the Interior’s responsibilities under the Federal Land Policy and Management Act, the Mineral Leasing Act, and the Denali National Park Improvement Act, as

amended by the John D. Dingell Jr. Conservation, Management, and Recreation Act. The proposed action will provide the opportunity, subject to appropriate conditions developed through the National Environmental Policy Act process, to construct a pipeline to transport energy resources from the North Slope to a sea port. Mitigation measures would minimize impacts on important subsistence resources and subsistence use areas.

The cumulative case, in conjunction with the proposed action, may result in a significant restriction to subsistence uses for the communities of Nuiqsut, Kaktovik, Utqiagvik, and Kaktovik. The BLM determined that such a significant restriction is necessary and consistent with sound management principles for the utilization of public lands.

U.4.2. The Proposed Activities 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 proposed action involves the minimal amount of public lands necessary to accomplish the purpose and need of the Alaska LNG Project EIS: to construct a pipeline to transport energy resources from the North Slope to a sea port. Under the proposed action, infrastructure would be co-located with existing infrastructure as much as possible, reducing the total disturbance footprint of the Project.

The no action alternative would result in no increase in public land use, but it would not meet the purpose and need of the Project.

U.4.3. Reasonable Steps will be Taken to Minimize Adverse Impacts on Subsistence Uses and Resources Resulting from Such Actions

Reasonable steps, delineated in the EIS, will be taken to minimize the adverse impacts on subsistence uses and resources. The proposed action includes numerous standard operating procedures and best management practices that are in use on the North Slope and elsewhere in Alaska. These measures are described in the Plan of Development and the associated plans for construction, operation, and resource protection.

Table 1 of the WAIP, filed with FERC on June 11, 2018, details potential impacts on wildlife from construction or operation of the Project. For each of those impacts, it includes the specific mitigation measures that will be adopted to reduce or eliminate these potential impacts. These include elevating the pipeline at above-ground locations to provide at least 7 feet of clearance underneath the pipe, use of safety fencing at known migration and feeding routes to divert caribou away from open trenches, and requiring a closed camp such that workers are not allowed to hunt or fish while staying at camps or other Project facilities.

The BLM has determined that the proposed action includes reasonable steps to minimize adverse impacts on subsistence uses and resources.

Included in the proponent's filing with FERC is Resource Report 3, Appendix O, which is the template for an SPOC. The final EIS describes how impacts can be mitigated through appropriate communication and coordination with subsistence advisory councils and subsistence users within local communities. The creation of and compliance with the SPOC will assure that potentially affected communities and

stakeholders are consistently and properly informed of construction and operational activities and will provide a venue for their concerns to be regularly heard.

The process by which the BLM authorizes a right-of-way includes the Notice to Proceed (NTP) phase. The NTP process allows the BLM to grant a right-of-way while some aspects of the overall project are not yet finalized. The BLM only gives an NTP when the proponent has finalized all plans for construction and operation and the plans are approved by the Authorized Officer. Approval by the Authorized Officer of each plan is contingent upon the plan meeting the right-of-way stipulations as well as all mitigation measures included in the Record of Decision.

U.5 REFERENCES

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. Available online at <https://www.blm.gov/policy/im-ak-2011-008>.

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.

EPA (Environmental Protection Agency). 2016. Environmental Justice: EJ 2020 Glossary. Available online at <https://www.epa.gov/environmentaljustice/ej-2020-glossary>.

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

North Slope Borough. 2014. North Slope Borough. 2014. Oil and Gas Technical Report: Planning for Oil and Gas Activities in the National Petroleum Reserve — Alaska. Available online at <http://www.north-slope.org/departments/planning-community-services/oil-and-gas-technical-report>.