

APPENDIX R

ANILCA Section 810 Analysis of Subsistence Impacts

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Alaska Stand Alone Gas Pipeline

ANILCA § 810 Analysis of Subsistence Impacts

As required by the Alaska National Interest Lands Conservation Act (ANILCA) § 810, an analysis of subsistence impacts was published in Appendix N of the Final Environmental Impact Statement (FEIS) for the Alaska Stand Alone Gas Pipeline (ASAP) (FEIS, 2012). The following findings were made:

1. Under the proposed action, impacts to the *abundance* and *availability* of subsistence resources *would not result in a significant reduction* in subsistence uses, and
2. Analysis of the cumulative case determined that reasonably foreseeable developments (RFD) associated with the proposed action *may result in a significant restriction* to subsistence uses for communities of the North Slope. Reduction in the *availability* of substance resources due to changes in animal movements was the primary concern.

In accordance with ANILCA, 16 USC § 3120(a) (1), hearings were held in Barrow, Nuiqsut, Kaktovik, Anaktuvuk Pass, and Wiseman in fall, 2012.

Subsequent to the publication of the FEIS, significant changes were made to the proposed pipeline route and design. These changes necessitated additional analysis of environmental impacts, which are described in the Final Supplemental Environmental Impact Statement (FSEIS). This ANILCA § 810 Evaluation focuses on the changes described in the FSEIS as well as changes in subsistence resources and resource uses in the vicinity of the project area.

A. Subsistence evaluation factors

Section 810(a) of ANILCA, 16 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 to subsistence under ANILCA § 810(a) must be completed for the ASAP FSEIS. ANILCA requires that this evaluation include findings on three specific issues:

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

To determine if a significant restriction of subsistence uses and needs may result from the alternatives presented in the FSEIS, including their cumulative effects, the following factors are specifically considered:

1. The reduction in the *abundance* of subsistence resources caused by a decline in the population or abundance of harvestable resources. This may include fish, wildlife, edible plants, house logs, firewood, or drinking water. Forces that may cause a reduction include adverse impacts to habitat, direct impacts to the resource, increased harvest, and increased competition from non-subsistence users;

2. Reduction in the *availability* of resources used for subsistence caused by alteration of their distribution, migration patterns, or location; and
3. Legal or physical limitations on *access* to subsistence resources.

If the analysis determines that the proposed action or the alternatives may significantly restrict subsistence uses, additional requirements include notifying the State of Alaska and appropriate regional and local subsistence committees and conducting ANILCA § 810 hearings in potentially affected communities.

Information from Chapters 3 and 4 of the ASAP FSEIS are the primary sources for this ANILCA § 810 Evaluation. Chapter 3.16 of the FSEIS describes the proposed action's affected environment and subsistence resources. Chapter 4.20 describes the potential adverse effects of the various alternatives to subsistence resources (specifically fish and wildlife) and subsistence activities.

B. ANILCA § 810(a) evaluations and findings for all alternatives and the cumulative case

The evaluation and findings focus on potential impacts to subsistence resources (*abundance*), and on the *availability* of and *access* to subsistence resources.

1. Evaluation and Finding for Alternative 1: Proposed Action

Under the Proposed Action, the Alaska Gas Development Corporation (AGDC) would construct, operate, and maintain the following:

1. Gas conditioning facility near Prudhoe Bay,
2. Approximately 733 miles of 36-inch diameter buried natural gas transmission pipeline,
3. Approximately 34 miles of 12-inch diameter buried natural gas lateral pipeline,
4. 40 mainline and 1 lateral block valves,
5. 5 pig launcher and/or receiver facilities, and,
6. Other permanent facilities.

The pipeline system would be designed to transport natural gas that would be accessible to and useable by urban centers, government entities, and natural resource development projects. Analysis of the Proposed Action considers the effects of construction, operation, and maintenance of these facilities to subsistence resources and uses.

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

The Proposed Action spans 4 geographic regions: North Slope, Interior, Tanana, and Southcentral. Twenty-two communities within these regions could be affected by the Proposed Action (Table 1). Eight of these communities (Nuiqsut, Anaktuvuk Pass, Wiseman, Coldfoot, Bettles, Rampart, Stevens Village, and Minto) have active subsistence use areas that overlap the proposed right-of-way. It is likely that Nenana, Healy, Anderson, Cantwell, Trapper Creek, Talkeetna, and Susitna subsistence use areas overlap the proposed right-of-way as well, although subsistence use area mapping has not been done for these communities.

Table 1. Federally qualified subsistence communities potentially affected by the Proposed Action. Communities denoted in bold are communities with subsistence use areas overlapping the proposed pipeline right-of-way.

North Slope Region	Interior Region	Tanana Region	Southcentral Region
Barrow	Wiseman	Tanana	Cantwell*
Nuiqsut	Coldfoot	Minto	Trapper Creek*
Kaktovik	Evansville*	Nenana*	Talkeetna*
Anaktuvuk Pass	Bettles	Healy*	Susitna*
	Alatna	Anderson*	
	Allakaket		
	Rampart		
	Stevens Village*		
	Beaver		

* Spatial data not available

AGDC identified 5 mitigation measures in the 2012 FEIS and 2 additional measures in the FSEIS to address impacts to subsistence during construction and/or operation:

1. Identify locations and times when subsistence activities occur [with input and involvement by local residents], and minimize work during these times and in these areas to the maximum extent practicable;
2. Schedule work to avoid conflict with subsistence activities when possible;
3. Notify workers that subsistence activities are ongoing in the area and direct them to avoid actions that may affect the activities (e.g. not removing trapline markers, etc.);
4. Coordinate with whaling groups and agencies to employ appropriate mitigation measures to avoid and minimize disturbance of noise and vessel traffic to subsistence species and activities;
5. . . . avoid and minimize impacts on whale movements, and avoid conflicts with whalers;
6. Consult with potentially affected communities and appropriate subsistence user organizations to discuss potential conflicts with subsistence marine mammal hunting, and
7. Prohibit [employees and subcontractors from] hunting, trapping, shooting, and camping within the leased [right-of-way] area.

This ANILCA § 810 Evaluation assumes that these mitigation measures will be fully implemented during all phases of construction and operation.

Construction

Construction-related activities such as clearing the right-of-way, trenching, drilling, and the presence of machinery, pipeline transport, workers, and infrastructure on and along the pipeline right-of-way would temporarily displace wildlife, specifically moose, caribou, and furbearers. Due to the short-term nature and timing of these activities, construction-related impacts to resource *availability* would not be significant. AGDC lists and describes critical time periods tied to specific habitats/areas (e.g. denning, calving) they would avoid during construction (ASAP FSEIS Mitigation Measures 1 and 2). Specifically, AGDC would avoid construction during caribou migration. If AGDC adheres to these mitigation efforts during construction, wildlife resource *availability* would not be affected.

The ASAP FSEIS lists “construction mortality” as a potential impact under the Proposed Action. Construction-related big game mortalities would be infrequent or nonexistent and would not significantly affect the *abundance* of wildlife for subsistence use.

The ASAP FSEIS lists “habitat loss and alteration” as a potential impact under the Proposed Action. Vegetation clearing would occur in localized areas and would not have a region-wide impact on the quality of habitat for big game or furbearers near the Proposed Action. Thus, wildlife resource *abundance* would not be significantly reduced. Small-scale habitat alteration may impact furbearers, which could reduce the *availability* of subsistence resources to local trappers, specifically for those communities immediately adjacent to the proposed pipeline right-of-way. These communities include Wiseman, Coldfoot, Nenana, Anderson, Healy, Cantwell, and Trapper Creek. Local changes in furbearer distribution are not anticipated to have a significant effect on furbearer *availability* for subsistence use.

Vegetation clearing may impact local berry picking areas, particularly for those communities immediately adjacent to the proposed pipeline right-of-way. These communities include Wiseman, Coldfoot, Nenana, Anderson, Healy, Cantwell, and Trapper Creek. These use areas are not well documented or mapped, but they are important to local residents and their locations are often very specific. The right-of-way would likely pass through some of these areas. The Draft ANILCA § 810 Evaluation therefore made a positive finding for impacts to resource *availability* specifically related to berry patches. It recommended determining the importance of these berry picking locations at the ANILCA § 810 public hearings. Subsistence users did not highlight specific berry patches that would be affected by the project, nor were impacts to berry picking expressed as a general concern at the hearings. Therefore, the BLM determines that the Proposed Action will not significantly affect resource *availability*.

The ASAP FSEIS lists “temporary reduction in harvester *access* to the proposed project area” as a potential impact under the Proposed Action. Implementing the mitigation measures described above, specifically those that instruct AGDC to communicate with local residents and representative subsistence groups, will result in construction activities not significantly restricting *access* to subsistence resources.

Operation and maintenance

Effects of infrastructure (particularly linear infrastructure such as roads and pipeline) on migratory caribou herds have been documented (Lawhead et al. 2006 and others). Subsistence users and representatives of local stakeholder groups (e.g. Western Arctic Caribou Herd Working Group, Federal Resource Advisory Councils, NPR-A Subsistence Advisory Panel) consistently emphasize their concerns that infrastructure alters caribou migration patterns. The buried pipeline described as part of the Proposed Action is unlikely to alter caribou movements. A significant reduction in *availability* of caribou for residents of the North Slope and Central Brooks Range is not anticipated.

Access roads would be cleared and maintained in support of pipeline operations. AGDC would discourage non-authorized use through signage and physical barriers, but efforts to deter users are unlikely to be fully successful. Non-authorized use of these roads by non-local hunters could increase competition for big game animals, but occurrences would likely be rare and would not significantly reduce *abundance* or *availability* of these resources. The ANILCA § 810 hearings did not suggest that non-local hunter access was a specific concern for local residents.

The proposed right-of-way is generally aligned with TAPS between Livengood and Prudhoe Bay. Therefore, increased access by non-local hunters is not anticipated to be an issue. Likewise, the proposed right-of-way is generally aligned with the Parks Highway between Healy and Willow. Decreased *availability* and *abundance* of resources resultant from unauthorized use is not anticipated in these areas.

b. Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved

Other lands are available for pipeline construction. 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.

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

Alternative 3 (No Action) completely eliminates the use of public lands.

Alternative 2 (Denali National Park and Preserve (NPP) Alignment) would increase the use of public lands by routing 7 miles of pipeline through Denali NPP. An aboveground pipeline from MP 0 to 62 would impact migratory caribou to a greater degree and has the potential to significantly impact *availability* of this resource for residents of the Central Brooks Range and the North Slope.

Section 2.6 of the ASAP FSEIS, Alternatives Considered but Eliminated from Detailed Analysis, discusses other alternatives that were considered but eliminated due to economic or technological disadvantages, or because they did not meet the purposes and need of the proposed action to transport natural gas from the North Slope to Cook Inlet.

The proposed action in the 2012 FEIS included construction and operation of two compressor stations, one of which would be located on public lands near Wiseman. While the effects of this compressor station were not explicitly described in the 2012 ANILCA § 810 Evaluation, they were discussed during 810 hearings. The revised design presented in the proposed action of the FSEIS does not have compressor stations, thus alleviating potential subsistence impacts to local residents.

d. Findings

Alternative 1 (Proposed Action) *would not result in a significant reduction* in subsistence uses. This finding applies to the communities listed in Table 1.

2. Evaluation and Finding for Alternative 2: Denali NPP Alignment

Alternative 2 retains the major components and objectives of the Proposed Action (Alternative 1), but differs in the following:

- Use of Dock Head 2 at West Dock,
- Construction of an aboveground pipeline from milepost (MP) 0 to MP 62,
- Route alignment through Denali National Park and Preserve (NPP) between MPs 535.8 and 543, and
- Aerial suspension of the pipeline across the Yukon River.

Use of Dock Head 2 and the construction of an aboveground pipeline would not take place on or near Federal lands.. The route modification and suspension of the pipeline across the Yukon River would occur on Federal lands. Effects of these modifications are addressed below.

The Denali NPP route variation would route the pipeline through approximately 7 miles of the park (FSEIS Fig. 2.4-1). In the northern portion of this route, the pipeline would be constructed within the existing Parks Highway corridor.

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

Realignment

Construction and maintenance-related disturbance would be similar to those described in Alternative 1. These activities would take place in an existing highway right-of-way, and would be less likely to disrupt animal movements. Aligning the pipeline with the Parks Highway right-of-way would reduce impacts to habitat (i.e. vegetation clearing) for subsistence game animals.

The realignment would not significantly impact subsistence resource *abundance* or *availability* and would not reduce *access* to subsistence resources.

Aboveground pipeline (MP 0-62)

While construction of an aboveground pipeline between MPs 0 and 62 would not take place on BLM-managed lands, it would potentially impact subsistence users by altering movements of migratory caribou. The Central Arctic Herd is an important subsistence resource for Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman, and Coldfoot. The pipeline would bisect the herd's range.

Construction of an elevated pipeline would cause minor temporary impacts to individual animals. AGDC proposes construction of the pipeline from MPs 0 to 62 during winter, which would minimize impacts to migrating caribou. Temporary displacement of individual animals would be expected along the segment of pipeline during construction. Construction would not significantly impact caribou *abundance* or *availability*, nor would it impede *access* to caribou by subsistence users.

The presence of an aboveground pipeline would cause greater impacts to wildlife (specifically caribou) than burial of the pipeline. Research suggests that, while ultimately caribou appear to habituate to roads and infrastructure, a full suite of reactions to new linear infrastructure (from no reaction to dramatic, novel movements) are possible, and cautions managers against applying results from specific studies to other situations (Wilson et al. 2016). Discussion and literature summaries of infrastructure impacts on caribou movement, as well as concerns expressed by local residents during public meetings, are discussed and summarized in Section 4.10.5.2.3 (pg. 4-277) of the ASAP FSEIS.

An additional aboveground feature on the North Slope in close proximity to the Dalton Highway and the Trans-Alaskan Pipeline System pipeline (TAPS) may significantly impact caribou *availability* for Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman, and Coldfoot.

b. Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved

Other lands are available for pipeline construction which would avoid Denali NPP. The proposed pipeline route through Denali NPP would maximize co-location of linear right-of-ways and reduce impacts to wildlife habitat.

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

Alternative 1 (Proposed Action) would decrease the use of public lands by routing 7 miles of pipeline around Denali NPP.

Alternative 3 (No Action) completely eliminates the use of public lands.

Section 2.6 of the ASAP FSEIS, Alternatives Considered but Eliminated from Detailed Analysis, discusses other alternatives that were considered but eliminated due to economic or technological disadvantages, or because they did not meet the purposes and need of the proposed action to transport natural gas from the North Slope to Cook Inlet. Nine of the twenty-nine alternatives summarized in Table

2.6-1 of the ASAP FSEIS met the purpose and need. None of these alternatives would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

d. Findings

This evaluation concludes that the Denali NPP Alignment Alternative *may result in a significant reduction* in subsistence uses for the communities of Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman, and Coldfoot due to potential reduction in the *availability* of caribou if an aboveground pipeline is constructed between MPs 0 and 62.

3. Evaluation and Finding for Alternative 3: No Action Alternative

Alternative 3 of the ASAP FSEIS is the No Action Alternative. Selection of this alternative would result in continued current management of BLM lands under the Utility Corridor Resource Management Plan (RMP) (1991), Central Yukon RMP (1986), and the East Alaska RMP (2007). Under this alternative, the pipeline and supporting infrastructure would not be built. Project-related impacts from construction, operation, and maintenance of the pipeline and supporting infrastructure would not occur under the No Action Alternative.

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

Abundance and *availability* of subsistence resources under the No Action Alternative would not change. Physical and legal *access* to subsistence resources and subsistence use areas would be maintained.

b. Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved

The proposed pipeline and supporting infrastructure would not be built under the No Action Alternative. Therefore, evaluating other lands for the pipeline route is not applicable.

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

The proposed pipeline and supporting infrastructure would not be built under the No Action Alternative. Therefore, evaluating other alternatives that would reduce impacts to lands and resources used for subsistence is not applicable.

d. Findings

The No Action Alternative *would not result in a significant reduction* in subsistence uses. This finding applies to the communities listed in Table 1.

4. Evaluation and Finding for the Cumulative Case

The cumulative case evaluates the impact of the Proposed Action (Alternative 1) in conjunction with past, present, and reasonably foreseeable future activities in the ASAP project area. Reasonably foreseeable actions are summarized in Section 4.26.7 of the ASAP FSEIS.

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

Abundance and *availability* of subsistence resources in the Cumulative Case would not change. Physical and legal *access* to subsistence resources and subsistence use areas would be maintained.

b. Evaluation of the Availability of Other Lands for the Purpose Sought to be Achieved

The pipeline right-of-way would not change under the Cumulative Case. The evaluation of alternative lands under Alternative 1 (Proposed Action) would therefore apply to the Cumulative Case.

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

The evaluation of other alternatives under Alternative 1 (Proposed Action) would apply to the Cumulative Case.

d. Findings

The Cumulative Case *would not result in a significant reduction* in subsistence uses. This finding applies to the communities listed in Table 1.

C. Subsistence determinations under the ANILCA Sec. 810(a)(3)(A), (B), and (C)

ANILCA § 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy, or disposition of the public lands which would significantly restrict subsistence uses shall be affected” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA § 810(a)(1) and (2), and makes the three determinations required by the ANILCA § 810(a)(3)(A), (B), and (C). The three determinations that must be made are: 1) that such a significant restriction of subsistence use is necessary, consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and 3) that reasonable steps will be taken to minimize adverse impacts to subsistence uses and resources resulting from such action [16 U.S.C. § 3120(a)(3)(A), (B), and (C)].

The BLM has found in this ANILCA § 810 Evaluation that Alternative 2 (Denali NPP Alignment) may significantly restrict subsistence uses. The BLM undertook the notice and hearing procedures required by ANILCA § 810(a)(1) and (2) in conjunction with release of the Draft Supplemental Environmental Impact Statement (USACE, 2017) in order to solicit public comment from the potentially affected communities and subsistence users.

The BLM has determined that, after consideration of all alternatives, subsistence evaluations, and public hearings, a significant restriction of subsistence uses is necessary consistent with sound management principles for the utilization of BLM-managed land. The selected alternative will involve the minimal amount of public lands necessary to accomplish the purpose and need. Reasonable steps, delineated in the FSEIS, have and will be taken to minimize the adverse impacts upon subsistence uses and resources arising from this action.

D. References

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