Appendix O – ANILCA Section 810 Analysis of Subsistence Impacts

O. ANILCA Section 810 Analysis of Subsistence Impacts

Alaska Railroad Corporation (ARRC or the Applicant) is seeking authorization to construct and operate a new rail line approximately 80 miles long from North Pole to Delta Junction, Alaska. To this end, the Surface Transportation Board (STB) has prepared an Environmental Impact Statement (EIS) to assess the environmental consequences of the proposed rail line. Chapters 3 through 16 of the Northern Rail Extension (NRE) EIS provide a detailed description of both the affected environment of the project area and the potential adverse effects of the proposed action and alternatives. Chapter 7 specifically addresses the potential impacts to subsistence uses within the project area. Appendix I provides a summary of the subsistence methodology, baseline data and potential impacts to communities. Appendix O uses the detailed information presented in the NRE EIS to evaluate the potential impacts to subsistence pursuant to Section 810 of the Alaska National Interest Land Conservation Act (ANILCA), specifically.

O.1 Subsistence Evaluation Factors

Section 810(a) of ANILCA requires that an evaluation of subsistence uses and needs be completed for any Federal determination to "withdraw, reserve, lease, or otherwise permit the use, occupancy or disposition of public lands." Federal regulations define subsistence uses as follows:

> …the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade. (ANILCA Title VIII Section 803)

The proposed NRE encompasses lands that are owned or managed by three different entities: private landowners (private lands), the State of Alaska (state lands), and the Bureau of Land Management (BLM) (Federal public lands). BLM would need to issue a right-of-way (ROW) for those portions of the NRE that cross Federal public lands.

Chapter 7 of the NRE EIS finds that neither state nor Federal subsistence regulations apply to the project area. Regarding state regulations, the project area is located within a state-designated nonsubsistence area. Regarding Federal regulations, all Federal public lands in the project area have been withdrawn for military uses, where subsistence regulations do not apply. As stated in the *Federal Register* (*Subsistence Management Regulations for Public Lands in Alaska*, Subpart A):

> [t]he military lands, including US Coast Guard, and Federal Aviation Administration have never been included in the Federal Subsistence Management Program because of national security and defense reasons. These lands have been and are closed to access by the general public, and are, therefore, not available for use by rural Alaska residents for harvest of subsistence resources. (70 *FR* 76400)

Despite the withdrawal of lands for military use, hunting and fishing activities are allowed under a Recreation Access Permit issued by the military. These activities must also be conducted in

compliance with state sport hunting and fishing regulations. However, the U.S. Army Garrison Alaska (USAG-AK), which manages the military-withdrawn lands in the project area, recognizes that subsistence harvesters use subsistence resources on its lands and takes responsibility for managing these resources for subsistence users. The USAG-AK recognizes that the following communities have subsistence interests on USAG-AK lands: Healy Lake, Dot Lake, Tanacross, Tetlin, Northway, Delta Junction, Big Delta, Deltana, Dry Creek, Minto, Nenana, and Cantwell. Thus, although subsistence uses on lands in the project area are not recognized under Federal regulations, residents from nearby communities use subsistence resources from these lands and may use these lands to access subsistence use areas on Federal public lands outside of the project area.

Because ANILCA requires an evaluation of potential impacts to subsistence uses on Federal public lands, regardless of whether the lands in question are subject to Federal subsistence management regulations, an ANILCA Section 810 evaluation was completed and issued with the NRE EIS. The evaluation only applies to those lands administered by BLM. The impacts of the entire project, together with past, present, and reasonably foreseeable activities in the surrounding region, are evaluated in the cumulative impacts section of this Section 810 analysis.

ANILCA requires that the Section 810 evaluation include findings on three specific issues:

1. The effect of such use, occupancy, or disposition on subsistence uses and needs;

2. The availability of other lands for the purpose sought to be achieved; and

3. Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes (16 United States Code 3120).

The evaluation and findings required by ANILCA Section 810 are set out for the Federal public lands portion of each of the alternatives (including the No-Action Alternative) considered in the NRE EIS, and for all lands under the cumulative impacts analysis.

A finding that the proposed action could significantly restrict subsistence uses imposes additional requirements, including provisions for notices to the state and appropriate regional and local subsistence committees, a hearing in the vicinity of the area involved, and the making of certain determinations as required by Section 810(a)(3). If the evaluation finds that a significant restriction could occur, BLM must determine whether:

A. Such a significant restriction of subsistence uses is necessary, and consistent with sound management principles for the utilization of the public lands;

B. The proposed activity would involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition; and

C. Reasonable steps would be taken to minimize adverse effects upon subsistence uses and resources resulting from such actions.

To determine if a significant restriction of subsistence uses and needs on Federal public lands could result from any one of the alternatives discussed in the NRE EIS, the following four

factors in particular were considered: 1) the reduction in the availability of subsistence resources caused by a decline in the population or amount of harvestable resources, 2) reductions in the availability of resources used for subsistence purposes caused by alteration of their normal locations and distribution patterns, 3) limitations on access to subsistence resources, including from increased competition for the resources, and 4) limitations on the ability of harvesters to reach and use active subsistence harvesting sites.

A significant restriction to subsistence could occur in at least three instances: 1) when an action substantially could reduce resource populations or their availability to subsistence users, 2) when an action could substantially alter current patterns of subsistence use, and 3) when an action could substantially limit access by subsistence users to resources. Section 7.3 (Environmental Consequences, Subsistence) of the NRE EIS provides much of the data concerning the potential impacts of the NRE, and was used to determine whether the level of effects of each alternative is extensive enough to cause a possible significant restriction to subsistence uses on Federal public lands. Section 7.2, (Affected Environment, Subsistence), provides information regarding areas and resources important for subsistence use, and the degree of dependence of affected villages on different subsistence populations. Chapter 5 of the NRE EIS provides a description of the affected environment and environmental consequences regarding biological resources. The information contained in the NRE EIS is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA Section 810 must also include a cumulative impacts analysis. Section O.2, below, begins with an evaluation and finding for the proposed action and alternatives. Under the proposed action, ARRC describes common support facilities as well as seven segments of the proposed NRE. ARRC is considering alternative segments (discussed under Section O.2.3, Evaluation and Finding for Alternative Segments on Federal Public Lands). The cumulative case is analyzed by viewing the NRE as a whole, and including all proposed activities on all lands and by using the most intensive cumulative case as is discussed in Chapter 17 of the NRE EIS. This approach follows ANILCA regarding Federal public lands. The approach also allows for the evaluation of impacts on subsistence by portions of the NRE project that are proposed on state or private lands, as well as subsistence restrictions that could occur from past, present, and future activities in the project area and vicinity. Alternative segments not on Federal public lands are also discussed under the cumulative case (Section O.2.4).

In addition to ANILCA, Executive Order 12898, *Environmental Justice*, also calls for the analysis of Federal actions on minority populations. Environmental Justice is defined as:

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

Section 4-4 of the Executive Order requires Federal agencies to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence, and to communicate to the public any risks associated with the consumption patterns. The subsistence analyses in Chapter 7 comply with the Executive Order.

O.2 ANILCA 810(a) Evaluations and Findings for All Alternatives and the Cumulative Case

The following evaluations are based on information relating to the environmental and subsistence consequences of the proposed action and alternatives, No-Action Alternative, alternative segments, and the cumulative case. The evaluations and findings focus on potential impacts to the subsistence resources themselves, as well as access, economic, and cultural issues that relate to subsistence use. For each individual alternative segment, the evaluation and finding applies to Federal public lands—those lands that are under the stewardship of BLM, and are subject to ANILCA review. The proposed action, together with other past, present, and reasonably foreseeable future actions that could restrict subsistence, are evaluated in the cumulative case.

O.2.1 Evaluation and Finding for the Applicant's Proposed Action

Under the proposed action, ARRC would construct and operate the NRE starting south of North Pole and ending south of Delta Junction. For this project ARRC would require a 200-foot ROW from BLM. Because these Federal public lands have been withdrawn for military purposes, consultation and authorization from USAG-AK would also be required. The majority of construction activities would occur within the 200-foot ROW. The rail line would generally follow the Tanana River, and would cross the Tanana, Delta, and Little Delta rivers; Delta Creek; and potentially the Salcha River. In addition to the rail line and associated bridges, infrastructure would include an unpaved access road to support rail line construction and operation, grade crossings, six communication towers, a passenger facility at Delta Junction, two section facilities, and track sidings. The construction phase would require the development of construction staging areas and camps outside the 200-foot ROW.

Train operations would include transport of commercial freight, military supplies, and passengers. ARRC estimates an average of four round-trip passenger trains and one round-trip freight train per day. Maximum train speeds would 79 miles per hour (mph) for passenger trains and 60 mph for freight trains.

The NRE EIS considers alternatives by common segment, alternative segment, and connector segment designations. ARRC has proposed the following sequence of segments for the proposed action: Eielson Alternative Segment 3, Salcha Alternative Segment 1, Connector Segment B, Central Alternative Segment 2, Donnelly Alternative Segment 1, and Delta Alternative Segment 1. This analysis addresses only proposed action segments on Federal public lands, and thus excludes impacts associated with North Common Segment, Connector Segment E, and South Common Segment (see Table O-1). Those segments that do not occur on Federal public lands are discussed in the cumulative analysis.

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

The analysis of the proposed action and alternatives presented in Section 7.3 of the NRE EIS considers the direct and indirect effects of construction and operation of the NRE on subsistence

Table O-1
Federal Public Land Status, NRE Alternative Segments

Alternative Segment	Proposed Action	Federal (Military)	Not Federal	Proposed and Federal
Eielson Alternative Segment 3	X	X		X
Salcha Alternative Segment 1	X	X		X
Connector Segment B	X	X		X
Central Alternative Segment 2	X	X		X
Donnelly Alternative Segment 1	X	X		X
Delta Alternative Segment 1	X	X		X
North Common Segment	X		X	
Salcha Alternative Segment 2			X	
Connector Segment E	X		X	
Donnelly Alternative Segment 2			X	
South Common Segment	X		X	
Eielson Alternative Segment 1		X		
Eielson Alternative Segment 2		X		
Connector Segment A		X		
Connector Segment C		X		
Connector Segment D		X		
Central Alternative Segment 1		X		
Delta Alternative Segment 2		X		

uses in and around the project area. Section 7.2 describes subsistence uses in the project area, and Appendix I provides summary baseline data regarding use areas, user access, resource availability, and competition for the 12 study communities. The 12 study communities were chosen based on their proximity to the project area, documented subsistence uses in and near the proposed rail line, and the USAG-AK's recognition of communities with subsistence interests in the area. These communities include Cantwell, Delta Junction, Dot Lake, Dry Creek, Healy Lake, Minto, Nenana, Northway, Salcha, Tanacross, Tetlin, and Tok. This document only addresses potential effects of the NRE on subsistence uses and resources on Federal public lands and for residents qualified as Federal subsistence users. The Federal government does not recognize Salcha residents as federal subsistence users because the community is located within the nonrural Fairbanks North Star Borough; therefore, potential effects related to Salcha subsistence uses are not discussed further. The study communities with documented use areas or harvests within the project area are Cantwell, Delta Junction, Dot Lake, Healy Lake, Minto, Nenana, and Tok. Direct effects on subsistence uses and resources are most likely to occur for the communities of Delta Junction, Healy Lake, Nenana, and Tok due to more prevalent subsistence use overlaps in the project area. Communities' uses of the project area are low relative to their overall use areas. However, subsistence use area data are not available for certain communities, such as Delta Junction, which are located within or close to the project area. Subsistence users in communities located downstream from the project area may experience effects if construction and operational activities related to the NRE affect anadromous fish.

The NRE EIS analysis concludes that construction of the NRE would have temporary direct effects on subsistence uses for Delta Junction, Healy Lake, Nenana, and Tok, which have more documented use in the project area. User access would be limited if residents' harvest activities occur at the same time and place as construction activities, particularly during construction of bridges over waterways and segments over existing trails. Noise and activity related to construction could deflect resources away from use areas, making resources less available to subsistence users and resulting in heightened competition for resources in the area. Furthermore, subsistence users could begin hunting in other communities' use areas due to changes in resource availability or harvester avoidance of noise and human activities, resulting in increased competition for residents in communities that do not use the project area. The loss of traditional use areas for Alaska Natives (Healy Lake lifetime use areas show considerable use of the project area) could result in indirect effects on residents' connection to these lands, leading to a sense of loss or intrusion on traditionally important harvest areas. Impacts on user access could lead to indirect effects such as hunters having to spend more time and money to travel farther for subsistence activities, and related effects on hunter safety.

Chapter 7 addresses operations-related impacts and concludes that development and operation of the NRE would result in direct effects on those communities whose subsistence uses overlap the project area (Delta Junction, Healy Lake, Nenana, and Tok). A main impact is related to user access. ARRC regulations prohibit public users from crossing rail lines without a permit except at grade crossings where those activities are approved. Instead of taking the most direct route, subsistence users would have to travel to the nearest grade crossing in order to access use areas on either side of the rail line. This would result in individuals having to travel farther and spend more time and money for subsistence pursuits.

Harvests of moose, caribou, furbearers, and fish have been documented in Unit 20A (NRE EIS Chapter 7), and trails and routes crossing the Tanana River into Game Management Unit 20A are also documented (NRE EIS Chapter 13). Individuals who use those routes to access Unit 20A for hunting, trapping, and fishing activities would experience impacts on access. The NRE could also result in subsistence users and wildlife following the rail corridor, increasing the availability of moose in the area as well as increasing competition along that corridor, which could affect overall regional subsistence patterns. These impacts could be mitigated by placing grade crossings at appropriate intervals along the rail line.

The NRE EIS also addresses impacts on subsistence resources in Chapter 5, Biological Resources. The chapter analyzes the potential effects to vegetation, fish resources, game mammals, and birds. Clearing of vegetation within the 200-foot ROW could result in long-term loss of vegetation, which could affect berry and plant harvests for residents who use the project area for those purposes. The proposed action crosses 27 fish streams, and Chapter 5 concludes that stream crossings could result in fish (resident and anadromous) habitat loss and blockage of fish movements, resulting in "moderate" impacts to fisheries. Regarding land mammals, the primary impacts related to NRE construction and operation include a potential for an average of 40 moose-train collision mortalities per year, habitat loss and fragmentation, and disturbances from increased noise and human activity. However, overall effects on land mammal populations and habitat in the region are expected to be relatively small. Chapter 5 also indicates that vegetation clearing could reduce habitat for birds, especially landbirds, and construction of

power lines and communication towers could result in collision mortality for birds. These impacts are expected to affect only a small proportion of bird habitat and population.

Most impacts on subsistence would be similar regardless of the alternative segment. However, some segments would result in a greater incidence of impacts due to the number of stream or bridge crossings or the number of recreation access routes affected. For the proposed action, Donnelly Alternative Segment 1 would require the highest number of bridges and culverts (37), followed by Eielson Alternative Segment 3 (17), Salcha Alternative Segment 1 (13), Central Alternative Segment 2 (11), Connector Segment B (3), and Delta Alternative Segment 1 (2). Of these segments, only Eielson Alternative Segment 3 requires a substantially higher number of bridges and culverts than its alternative segments (*i.e.*, Eielson alternative segments 1 and 2). Construction of segments with more bridges and culverts would have higher impacts on subsistence uses and travel in the project area. Construction and operation of those segments could have an effect on resident and anadromous fish populations and habitats, which could result in effects on the availability of these resources to subsistence users, including subsistence users in communities located downstream from the project area who harvest anadromous fish.

Of the proposed action alternative segments (on Federal public land), Eielson Alternative Segment 3 and Donnelly Alternative Segment 1 would have the highest number of recreation access route intersections (six). Two of the alternative segments would have more access route intersections than their alternatives, and two would have fewer access route intersections than their alternatives. Delta Alternative Segment 1 would not intersect any recreation access routes, but, as stated in the NRE EIS Table S-2, both Delta alternative segments would intersect "numerous legal, informal trails."

Overall, the differences among the proposed action and the alternative segments regarding the number stream or bridge crossings and the number of recreation access routes affected, are minimal. Additional alternative segments are discussed below in Section O.2.3.

Evaluation of the Availability of Other Lands for the Northern Rail Extension

The purpose of the proposed NRE is to extend current freight and passenger rail services to areas south of North Pole, and to provide an alternative to Richardson Highway for these services. The proposed rail line alternatives follow a relatively direct route from the end of the existing rail line, north of Eielson Air Force Base (AFB), to south of Delta Junction. The alternative segments follow the existing highway and/or the Tanana River relatively closely. Various alternatives were considered, some of which were eliminated during the alternatives development process. Alternatives were chosen for further analysis based on considerations of engineering and environmental factors as well as on issues raised by agencies or the public. Because the purpose of the proposed NRE is to construct and operate a rail line between two points (North Pole and Delta Junction) and because constructing and operating a rail line outside of the project area could lead to greater adverse environmental impacts and engineering obstacles, lands outside of the proposed project area would not satisfy the purpose and need of the NRE.

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

Other alternatives that would reduce or eliminate the use of Federal public lands needed for subsistence purposes are described in NRE EIS Chapter 7 and Appendix I, many of which became alternatives considered but eliminated from further analysis because they did not meet the purpose and need of the proposed project to provide freight and passenger services to areas south of North Pole; they could lead to greater adverse impacts on the environment; or they presented construction or operational limitations. Section 2.2.2 of the EIS provides a description of the alternatives eliminated from the study as well as the reasons for the elimination of these alternatives.

Finding

The effects of the proposed action fall below the level of significantly restricting subsistence use for the 12 study communities (Cantwell, Delta Junction, Dot Lake, Dry Creek, Healy Lake, Minto, Nenana, Northway, Tanacross, Tetlin, and Tok). The impacts to subsistence resources and access as discussed above would be minimal, and documented uses within the project area are relatively low.

According to BLM ANILCA policy, "significant restrictions are differentiated from insignificant restrictions by a process assessing whether the action undertaken shall have no or a slight effect as opposed to large or substantial effects" (BLM Instructional Memorandum No. AK86-350, Policy for Section 810 Compliance with the Alaska National Interest Lands Conservation Act). Further direction states "no significant restriction results when there would be 'no or a slight' reduction in the abundance of harvestable resources and no or only 'occasional' redistribution of these resources; there would be no effect (or slight inconvenience) on the ability of harvesters to reach and use active subsistence harvesting sites; and there would be no substantial increase in competition for harvestable resources" (*ibid.*).

O.2.2 Evaluation and Finding for the No-Action Alternative

Under the No-Action Alternative, ARRC would not construct or operate an extension of the existing rail line, nor would it construct or operate related passenger facilities, bridges (including the dual-modal bridge over the Tanana River), or other infrastructure. BLM would not issue a ROW to allow construction of the NRE.

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

Under the No-Action Alternative, construction and operation of the NRE and related bridges and facilities would not occur. User access, resource abundance and distribution, and competition for subsistence resources would not be affected. No changes to subsistence for residents of the study communities would result from the No-Action Alternative. The possibility that other activities could occur in the project area that could result in adverse effects on subsistence uses is considered below under the cumulative impacts analysis.

Evaluation of the Availability of Other Lands for the Northern Rail Extension

Under the No-Action alternative, construction and operation of the NRE and related facilities would not occur. Therefore, the evaluation of the availability of other lands for the NRE is not necessary.

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

No rail line or related facilities would be constructed or operated in the project area under the No-Action Alternative, thus no additional Federal public lands would be made unavailable for subsistence uses.

Finding

The effects of the No-Action Alternative fall below the level of possibly significantly restricting subsistence uses and needs. As discussed above, there would be no impacts to subsistence resources and access.

O.2.3 Evaluation and Finding for Alternative Segments on Federal Public Lands

Under the alternative segments, ARRC would construct and operate the NRE starting south of North Pole and ending south of Delta Junction. For this project ARRC would require a 200-foot ROW from BLM. Alternative segments located on Federal public lands include Eielson Alternative Segments 1 and 2, Connector Segments A, C, and D, Central Alternative Segment 1, and Delta Alternative Segment 2. Rail construction and operation under these alternative segments would generally be the same; however, the segment routes would change. Changes in segment routes in some cases alters the number of stream or bridge crossings required, the number of recreation access route intersections, and the amount of habitat affected.

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

As discussed under the evaluation for the proposed action, impacts on subsistence uses would be similar regardless of the alternative segment, and differences between the proposed action alternative segments and the remaining alternative segments are minimal. Thus the evaluation of the impacts to subsistence uses for the alternative segments would essentially be the same as that presented for the proposed action. Alternative segments could result in slight differences in impact levels due to differences in the number of bridge and stream crossings (which could affect access during construction and could disturb fish habitat resulting in decreased resource availability) and differences in the number of recreation access route intersections (which could affect user access).

The number of bridge and stream crossings required for the alternative segments would be highest for Eielson Alternative Segment 1 (14), followed by Eielson Alternative Segment 2 (13), Central Alternative Segment 1 (10), Connector Segment C (7), Connector Segments A and D (4), and Delta Alternative Segment 2 (1). The alternative segments that would require fewer bridge

and stream crossings than the proposed action include Eielson Alternative Segments 1 and 2 and Central Alternative Segment 1. The other segments would require an equal or greater number of bridge and stream crossings than the proposed action. Overall, there are only minor differences between the alternative segments and the proposed action in regards to bridge and stream crossings.

The number of recreation access route intersections would be higher under Eielson Alternative Segments 1 and 2 than under Eielson Alternative Segment 3 (the proposed action). The remaining alternative segments would intersect either none or one access route intersection. As with Delta Alternative Segment 2 (the proposed action), Delta Alternative Segment 3 would intersect "numerous legal, informal trails" (see NRE EIS Table S-2).

Evaluation of the Availability of Other Lands for the Northern Rail Extension

The Applicant states that the purpose of the proposed NRE is to extend current freight and passenger rail services to areas south of North Pole, and to provide an alternative to Richardson Highway for these services. The alternatives follow a relatively direct route from the end of the existing rail line, north of Eielson AFB, to south of Delta Junction. The alternatives follow the existing highway and/or the Tanana River relatively closely. Various alternatives were considered, some of which were eliminated during the alternatives development process. The alternatives selected for detailed analysis were chosen based on considerations of engineering and environmental factors as well as on issues raised by agencies or the public. Because the purpose of the proposed NRE is to construct and operate a rail line between two points (North Pole and Delta Junction) and because constructing and operating a rail line outside of the project area could lead to greater adverse environmental impacts and engineering obstacles, lands outside of the proposed project area would not satisfy the purpose and need of the NRE.

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

Other alternatives that would reduce or eliminate the use of Federal public lands needed for subsistence purposes are described in Chapter 2 and Appendix D of the NRE EIS, many of which became alternatives considered but eliminated from further analysis because they did not meet the purpose and need of the proposed project; they could lead to greater adverse impacts on the environment; or they presented construction or operational limitations. Section 2.2.2 of the NRE EIS provides a description of the alternatives eliminated from the study as well as the reasons for the elimination of these alternatives.

Finding

The effects of the proposed action fall below the level of significantly restricting subsistence use for the 12 study communities (Cantwell, Delta Junction, Dot Lake, Dry Creek, Healy Lake, Minto, Nenana, Northway, Tanacross, Tetlin, and Tok). The impacts to subsistence resources and access as discussed above would be minimal, and documented uses within the project area are relatively low.

According to BLM ANILCA policy, "significant restrictions are differentiated from insignificant restrictions by a process assessing whether the action undertaken shall have no or a slight effect as opposed to large or substantial effects" (BLM Instructional Memorandum No. AK86-350, Policy for Section 810 Compliance with the Alaska National Interest Lands Conservation Act). Further direction states "no significant restriction results when there would be 'no or a slight' reduction in the abundance of harvestable resources and no or only 'occasional' redistribution of these resources; there would be no effect (or slight inconvenience) on the ability of harvesters to reach and use active subsistence harvesting sites; and there would be no substantial increase in competition for harvestable resources" (*ibid.*).

O.2.4 Evaluation and Finding for the Cumulative Case

Chapter 17 (Cumulative Impacts) of the NRE EIS outlines the cumulative effects of the NRE and other planned activities and developments on human and environmental resources in the project area. To analyze the potential cumulative impacts in the project area, the EIS considered all past, present, and reasonably foreseeable future projects and actions that could result in impacts in the project area. These include military activities, a proposed Alaska natural gas pipeline, and Richardson Highway upgrades. Other potential activities were considered in the NRE EIS but were not analyzed in detail because they were not considered reasonably foreseeable at this time.

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

The cumulative case includes potential adverse effects on subsistence uses caused by construction and operation of the NRE as well as construction and operation related to expansion of military activities, the proposed natural gas pipeline, and Richardson Highway upgrades.

Effects on subsistence related to the NRE include effects to user access due to restrictions on access over the NRE rail line and restrictions on activities within and across the ROW; changes in resource distribution and availability due to the creation of a vegetation-free corridor, an increase in train-moose collisions, destruction of fish habitat, and blockage of fish movements; and increased competition due to changes in access and resource availability. Additional construction, operation, and infrastructure-related impacts associated with military expansion activities, roadway upgrades, and the proposed Alaska natural gas pipeline would contribute to cumulative impacts on subsistence access, resource availability and competition. Chapter 7 of the NRE EIS concludes that harvests of land mammals, furbearers, and fish occur within Game Management Unit 20A. Residents from the study communities who travel through the project area to access that unit would likely experience effects related to access. Any impacts related to subsistence access could also cause increased resource competition for other communities, even if they do not use the project area for subsistence activities.

Chapter 17 of the NRE EIS also addresses cumulative impacts on biological resources, which include land mammals and fish. Effects on land mammals include increased mortalities due to collisions with trains (predicted to occur primarily with moose); habitat disturbance related to clearing of vegetation and human activity and noise; and reduced survival and breeding success due to noise, human activity, and exposure to contaminants. Effects on resident and anadromous fish include habitat disturbance due to construction of bridges and culverts, and blockage of fish

movements due to the installation of culverts and bridge-related structures. Changes in the abundance and distribution of biological resources could also affect the availability of these resources to subsistence users. Construction, operation, and infrastructure associated with military expansion activities, roadway upgrades, and the proposed Alaska natural gas pipeline would contribute to impacts on resource habitat, abundance, and distribution, thus leading to increased impacts on subsistence users in the area.

Future military-related projects that could affect subsistence uses in and around the project area include construction of new range complexes and new facilities in the Donnelly Training Area (TA), and replacement and upgrade of a rail loading facility at Fort Wainwright. The construction of new range complexes and facilities could result in loss of habitat due to removal of vegetation and increased noise and human activity; changes in resource distribution due to resource avoidance of human activity; and mortality from construction activities. The addition of new structures in Donnelly TA could also result in increased restrictions on subsistence user access in those areas.

Although the exact route of the proposed Alaska natural gas pipeline is unknown at this time, it could run through North Pole to Delta Junction. If this is the case, the pipeline and additional related infrastructure could further affect user access as well as resource availability, in a manner similar to the NRE. Construction activities could affect resource habitat and distribution. The pipeline would likely be located within a vegetation-free corridor, which could also affect resource distribution and create new competition for resources in that area. The pipeline could affect the movement of animals and subsistence users overland, depending on its height. An increase in the local population due to employment for construction of the pipeline could also create competition for local users.

Although Richardson Highway upgrades already occur on a regular basis, construction of the Alaska Natural Gas Pipeline as well as other infrastructure projects could spur more substantial upgrades to the road system, such as resurfacing and expansion for access and passing lanes. Specific projects that are planned for the future include a new weigh station, new ramps, interchange improvements, resurfacing, and bridge repair or replacement. An increase in construction activities along the roadway could temporarily displace resources from the roadway and road expansion could lead to habitat loss. Because the highway already exists and there are no plans to significantly alter its route, the additional construction would likely not result in major changes for subsistence users or resources in the area. However, effects of construction and habitat loss in concert with other developments could lead to greater cumulative effects.

The proposed NRE includes alternative segments not located on Federal public lands. These include North Common Segment (proposed action), South Common Segment (proposed action), Salcha Alternative Segment 2, Connector Segment E (proposed action), and Donnelly Alternative Segment 2. These segments would result in similar impacts to those described under the evaluation of the proposed action (see Section O.2.1). Alternative segments not on Federal public lands would intersect between zero and five recreation access routes, lower than some of the alternative segments on Federal public lands. Intersection of access routes could affect access to subsistence use areas. Two of the alternative segments would require a relatively high number of bridge or stream crossings, with Donnelly Alternative Segment 2 requiring 48 crossings (higher than any other alternative segment) and Salcha Alternative Segment 2 requiring

18 crossings. Construction of bridge and stream crossings could affect fish habitat and block fish movement, resulting in decreased availability for subsistence users.

Evaluation of the Availability of Other Lands for the Northern Rail Extension

The purpose of the proposed NRE is to extend current freight and passenger rail services to areas south of North Pole, and to provide an alternative to Richardson Highway for these services. The proposed rail line alternatives follow a relatively direct route from the end of the existing rail line, north of Eielson Air Force Base (AFB), to south of Delta Junction. The alternatives follow the existing highway and/or the Tanana River relatively closely. Various alternatives were considered, some of which were eliminated during the alternatives development process. The alternatives selected for detailed analysis were chosen based on considerations of engineering and environmental factors as well as on issues raised by agencies or the public. Because the purpose of the proposed NRE is to construct and operate a rail line between two points (North Pole and Delta Junction) and because constructing and operating a rail line outside of the project area could lead to greater adverse environmental impacts and engineering obstacles, lands outside of the proposed project area would not satisfy the purpose and need of the NRE.

Because the routes and locations of reasonably foreseeable activities that could affect subsistence uses in the project area are unknown at this time, it is not possible to evaluate the availability of other lands for these purposes.

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

Other alternatives that would reduce or eliminate the use of Federal public lands needed for subsistence purposes are described in NRE EIS Chapter 2 and Appendix D, many of which became alternatives considered but eliminated from further analysis because they did not meet the purpose and need of the proposed project; they could lead to greater adverse impacts on the environment; or they presented construction or operational limitations. Section 2.2.2 of the EIS provides a description of the alternatives eliminated from the study as well as the reasons for the elimination of these alternatives.

Finding

Construction and operation of the NRE in addition to other planned developments that could result in increased restrictions on user access, changes in resource availability, and an increase in competition for subsistence resources. Harvests of land mammals, furbearers, and fish occur within Unit 20A, and residents from the study communities who travel through the project area to access that unit would likely experience effects related to access. Subsistence users who do not travel through that area still could experience changes in harvest success due to decreased resource availability or increased competition. However, subsistence uses on the lands in question are either undocumented or minimal for the majority of the study communities when compared to their overall use areas. Furthermore, overall impacts on the populations of biological resources related to NRE construction and operations are expected to be low. Thus,

this evaluation concludes that the cumulative impacts would not result in a significant restriction to subsistence uses.

O.3 Notice and Hearings

ANILCA Section 810(a) provides that no "withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the Federal public lands which would significantly restrict subsistence uses shall be effected" until the Federal agency gives the required notice and holds a hearing in accordance with Section 810(a)(1) and (2). BLM will provide notice in the *Federal Register* that it has made negative findings pursuant to Section 810 that all Alternatives in the NRE EIS fall below the "may significantly restrict" threshold.