

CHAPTER 1: INTRODUCTION AND PURPOSE OF AND NEED FOR ACTION



1 Introduction: Purpose of and Need for Action

1.1 Summary of Major Changes between the Draft and Final EIS

Several major changes were made to the Draft Environmental Impact Statement (EIS) and incorporated into this chapter of the Final EIS based on public comments on the Draft EIS. These are (and Section where change was made):

1. Elaborated on Doyon, Limited (Doyon) corporate structure, goals, and mission (Section 1.3.2.3).
2. Included a discussion of the Yukon Flats Land Protection Plan (Section 1.4.4.1).
3. Included a discussion of how water body acreage on the Yukon Flats National Wildlife Refuge (Refuge) was determined (Section 1.4.5).
4. Included a list of selected water bodies with federal determinations of non-navigability disputed by the State of Alaska (**Table 1-1**).
5. Included a discussion of public review and comment on the Draft EIS (Section 1.8).
6. Referenced a new Public Comment Response Volume 2 in the organization of the EIS (Section 1.11).

1.2 Proposed Action

The U.S. Fish and Wildlife Service (Service) is considering a proposal to exchange certain lands within the Yukon Flats National Wildlife Refuge (Refuge) with Doyon, Limited. Doyon is an Alaska Native regional corporation established under the Alaska Native Claims Settlement Act of 1971 (ANCSA; 43 United States Code [USC] §1601 et seq.) and the largest private landowner in the Refuge. **Figure 1-1** shows the location of the Refuge and status of lands within and adjacent to the Refuge boundaries.

From the time the Refuge was established in 1980, Doyon has been interested in acquiring Federal oil and gas interests in the south-central portion of the Refuge (U.S. Fish and Wildlife Service 2005). The Service declined early proposals to exchange an oil and gas lease for conservation easements on Doyon's lands, but is considering a fee title exchange of lands.

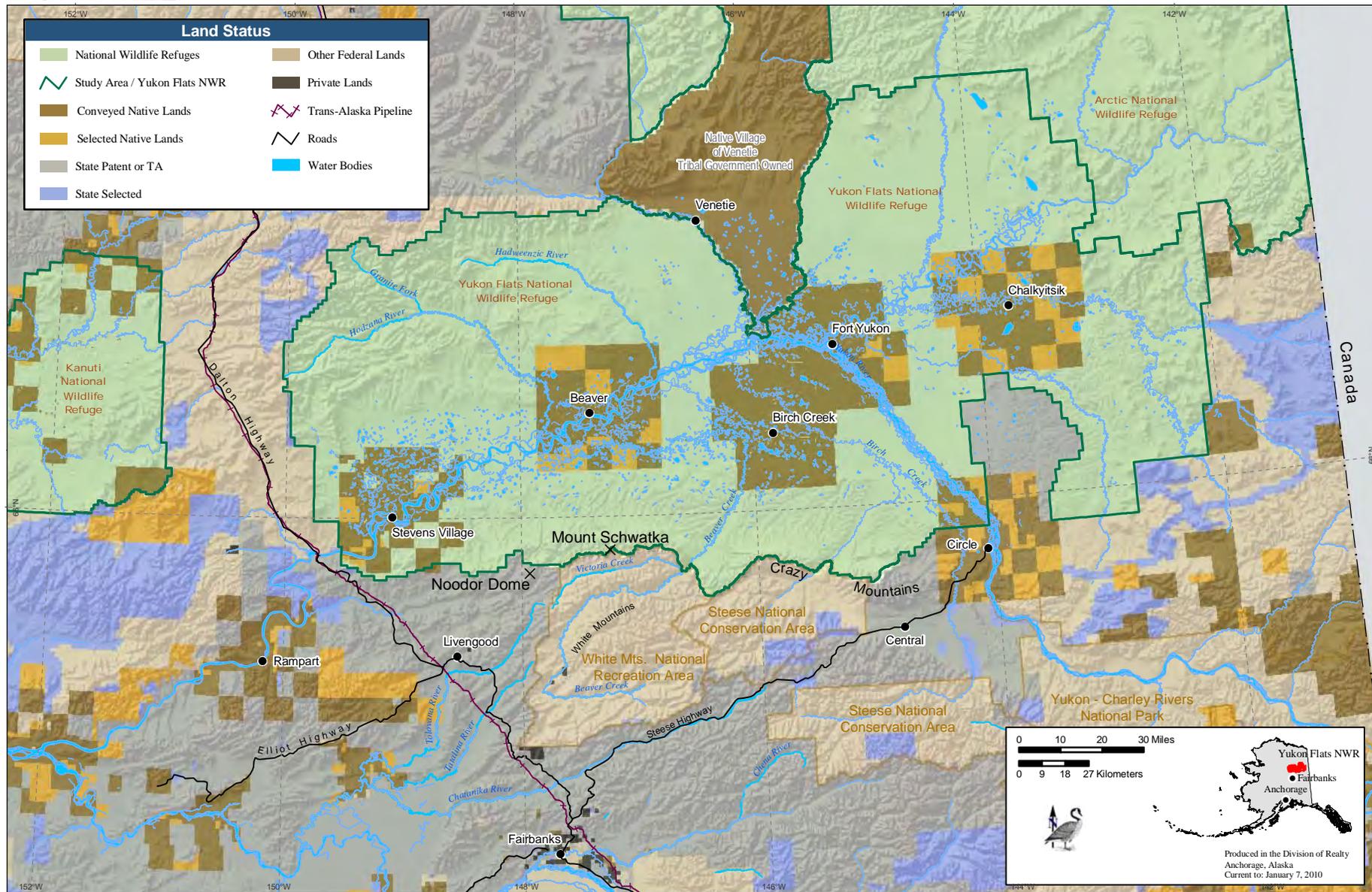
In 2004, following years of negotiations, both parties tentatively agreed upon the terms of a proposed land exchange, as detailed in the Agreement in Principle (**Appendix A**). The proposed land exchange would give Doyon fee title to: (1) 110,000 acres of Refuge lands (core lands) that may hold developable oil and gas resources; and (2) oil and gas rights (no surface occupancy or access) to an adjacent 97,000 acres (halo lands) of Refuge lands (**Figure 1-2**). In exchange, the U.S. Government (Government) would receive a minimum of 150,000 acres (exchange lands) of Doyon lands, within the Refuge, that are primarily lowland habitats. Doyon also would reallocate certain land entitlements so that 56,500 acres of ANCSA 12(b) land selections within the Refuge would remain in Federal ownership instead of being conveyed to Native corporations. Furthermore, each party would exchange an additional 132,000 acres (consolidation lands



Proposed Land Exchange EIS

U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska

Figure 1-1
The Yukon Flats NWR and Surrounding Area



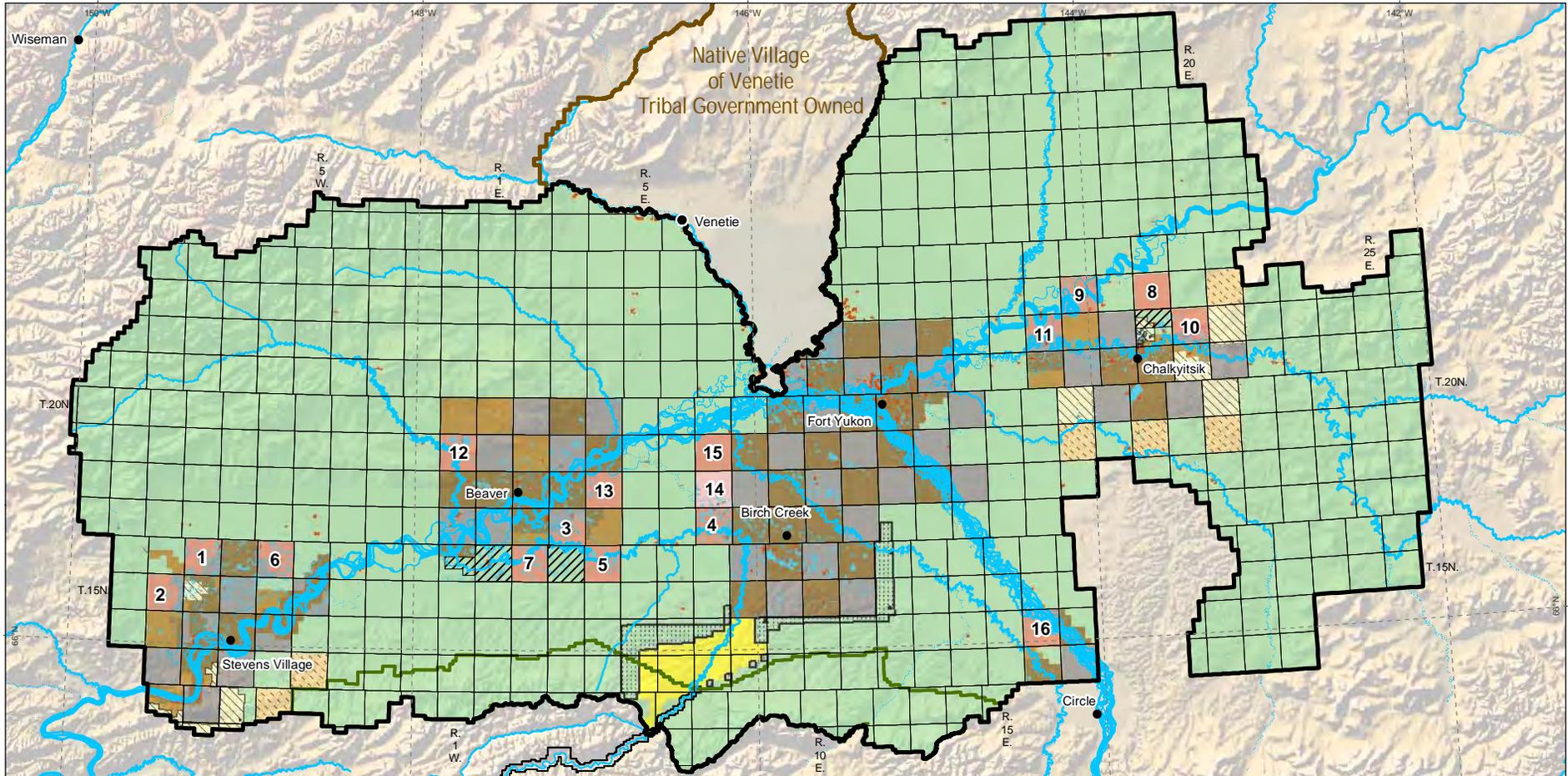


Proposed Land Exchange EIS

U.S. Fish & Wildlife Service

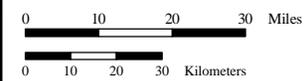
Yukon Flats National Wildlife Refuge, Alaska

Figure 1-2 Proposed Action and Priority Rankings for Doyon Lands



Land Status

- Yukon Flats Refuge
- Refuge Lands (Service)
- Conveyed Doyon Lands
- Conveyed Village Lands
- Selected Village Lands
- Other Private Lands
- Venetie Reservation
- Service Lands to Doyon (Core Lands)
- Service Oil & Gas Interests to Doyon (Halo Lands)
- ANCSA 12(b) Selections to be Reallocated outside the Refuge
- Doyon Lands to Service (Exchange Lands)
- 1 - 16* Service Priority Ranking
*At a minimum, the U.S. would receive Priorities 1- 8 (150,000 acres) in Phase I of the exchange.
- Land to Service Subject to Acquisition by Doyon (Exchange Lands)
- Service Lands to Doyon (Consolidation Lands)
- Doyon Lands to Service (Consolidation Lands)
- Service Recommended Wilderness Area
- Beaver Creek Wild River Corridor
- Rivers, Streams, Lakes and Ponds



Produced by Allied GIS
Anchorage, Alaska
Map Prepared: December 28, 2009

totaling 264,000 acres) to consolidate ownerships and facilitate land management within the Refuge boundaries (**Figure 1-2**).

Doyon has committed to exchange at least 150,000 acres for 110,000 acres of Refuge land. The actual amount exchanged by Doyon would increase if appraisals indicate that more than 150,000 acres are needed to equal the value of the Refuge parcel. However, no less than 150,000 acres would be exchanged even if fewer acres are needed to equalize values. The Service prioritized Doyon's lands based on habitat and resource values during the negotiation process and would acquire lands from Doyon according to this priority list. At a minimum, the Service would receive priority lands 1 through 8 (150,000 acres; **Figure 1-2**). The prioritization process is described in Chapter 2.

If approved, the exchange could be completed by the end of 2011, and oil and gas exploration on the lands received by Doyon could follow within a few years. If Doyon were to subsequently produce oil and/or gas on these lands, the Service would receive a production payment of 1.25% of the resource value at the wellhead or 1.5% if a transportation corridor were constructed across Refuge lands. These funds could be used only to acquire additional lands within national wildlife refuges in Alaska and to construct refuge facilities. If oil or gas is produced on the core lands, Doyon also has agreed to sell up to 120,000 acres (Priorities 9 through 16; **Figure 1-2**) of its land holdings (surface and subsurface) within the Refuge to the Government.

Section 910 of the Alaska National Interest Lands Conservation Act (ANILCA; Public Law [PL] 96-487) exempts land conveyances to Alaska Native corporations from compliance with the National Environmental Policy Act (NEPA). Under this provision, a NEPA document is not required when the Service and a Native corporation exchange lands. However, this exchange is controversial. Both the public and Doyon urged the Service to thoroughly analyze the impacts of the proposed land exchange and potential oil and gas development. The Service agreed to prepare this EIS for the proposed land exchange.

1.3 Purpose of and Need for the Proposed Action

1.3.1 Background

National wildlife refuges in Alaska are noteworthy for the large amount of private lands within their boundaries. Alaska's refuges were created to conserve natural habitats and the many species of fish, wildlife, and plants they support. Yet many Alaska refuges are checkered with private lands, the majority under Native corporation ownership. These Alaska Native corporations commonly seek ways to generate revenue and shareholder income while conserving traditional Native culture and lifestyle. One of the quandaries facing the refuge system is finding ways to fulfill our conservation mission while accommodating the needs of neighboring landowners whenever possible.

1.3.1.1 ANCSA and ANILCA Determined Landownership Patterns

The current landownership patterns in Alaska's national wildlife refuges resulted from two significant pieces of land legislation. The first of these settled the land claims of Alaska Natives more than a century after the United States acquired Alaska. In 1971, following a long and contentious Congressional debate, ANCSA passed into law. The Act authorized the establishment of 13 Native regional corporations and more than 200 Native village corporations. Under

ANCSA, the corporations received \$962.5 million in capital and the right to select 44 million acres of Federal land in Alaska.

Concurrent with Congressional deliberations to settle Native claims, environmental interests advocated the creation of new conservation areas in Alaska. In response to these interests, Congress passed a second major piece of legislation in 1980. The ANILCA created new parks, refuges, and other Conservation System Units and expanded the boundaries of others. This landmark piece of legislation was intended to preserve vast, relatively undisturbed areas in their natural state, including arctic tundra, boreal forest, and coastal rainforest ecosystems (Section 101[b]). A principal component of the boundary delineations was the inclusion of sufficient upland watershed lands to prevent degradation of the low-lying wetlands. The boundaries were drawn roughly along major ecological features, such as watershed boundaries, regardless of existing landownership patterns. Consequently, the boundaries incorporated many lands previously conveyed to, or selected by, Native corporations under the ANCSA provisions.

Although ANCSA and ANILCA addressed both Native and conservation interests, they also set the stage for potential conflicts. Economic development on ANCSA land was an expected outcome of ANCSA (House Report No. 92-523, 1971), yet many of these ANCSA lands are surrounded by refuges, parks, or other Conservation System Units with a conservation mandate.

1.3.1.2 Native Claims Included Quality Habitats

Considering the traditional subsistence lifestyle of Alaska Natives, it was predictable that Native land selections would include some of the most productive fish and wildlife habitats in the state. It is not surprising that the lands used and occupied by Natives overlap many of the lands worthy of protection for conservation purposes. Indeed, more than half of the Native selections and conveyances are located within the current boundaries of the 16 refuges in Alaska. Because of their traditional subsistence lifestyles, many corporation shareholders share a land ethic that is generally consistent with sound resource management. Nevertheless, economic pressures usually compel corporations to seek some form of responsible development.

1.3.1.3 Native Landownership in the Refuge

Like most Alaska refuges, the Yukon Flats National Wildlife Refuge contains a patchwork of private land that pre-dates the establishment of the Refuge (**Figure 1-1**). About 18% of the land within the boundary of the Refuge is Native-owned. The exterior boundaries of the Refuge encompass approximately 10.9 million acres of land and water, including about 2.5 million acres of land owned or selected by Native corporations or Tribal governments. The Native land is concentrated around the major river systems running through the Refuge.

Doyon, the Native regional corporation for much of interior Alaska, is the largest private landowner in Alaska with a land entitlement of 12.5 million acres and over 14,000 shareholders. Within the Refuge boundaries, Doyon has ownership interests in the surface and subsurface estates of 1.15 million acres of land and the subsurface estate of another 782,000 acres. Of these, 1.055 million or more acres have oil and gas potential. Because Doyon receives the subsurface estate beneath conveyed village corporation land, Doyon's holdings will increase as additional village selections are conveyed.

1.3.1.4 Doyon-Selected Oil and Gas Lands under ANCSA

Congress intended ANCSA to provide economic opportunities for Native corporations and expected that corporations would select lands with economic potential. In the Yukon Flats Basin,

Doyon recognized the importance of obtaining lands with oil and gas potential and worked with the village corporations to maximize Native ownership of these lands. With that in mind, Doyon allocated over 330,000 acres of ANCSA land to the Yukon Flats villages that could have been allocated to other villages throughout interior Alaska. The intent was both to increase potential Native control of economically valuable resources and to compensate Native landowners for potential development impacts by maximizing the amount of land under Native ownership. However, general ANCSA conveyance rules put constraints on which lands were available. This limited the ability of the Native corporations to select all lands with oil and gas potential within the Yukon Flats Basin. The proposed land exchange would enable Doyon to gain title to lands it was unable to obtain under ANCSA.

Over the past 30 years, Doyon has entered into a number of exploration ventures throughout interior Alaska to ascertain resource development potential of its current land holdings. Currently, Doyon is promoting oil and gas exploration and development of lands it owns within the Refuge and may develop these lands with or without the land exchange. However, Doyon's interest in the exchange area is unlikely to wane. The exchange area is located above a deep (to a depth of 28,000 feet) sedimentary basin and demonstrates potential for economically viable quantities of oil and gas. The proposed land exchange would add this deep-basin area to Doyon's land base and could help Doyon attract oil and gas industry partners who would lease lands from Doyon and potentially conduct oil and gas exploration and development on Doyon lands in the Yukon Flats Basin.

1.3.2 Purpose and Need

The NEPA process begins when a Federal agency realizes it has a need for an action to meet an agency objective, to fill a mission deficiency, or to respond to an outside applicant's request to take some action that is under the agency's jurisdiction. For this or any other proposed land exchange, the Service "need" is simply to respond to the exchange request.

The primary responsibility of the Refuge is to protect and promote those purposes for which the Refuge was established. As a public land management agency, however, the Service has an inherent responsibility to consider input, proposals, and requests from the public. The Service's mission, working with others to conserve, protect, and enhance fish, wildlife, and plants for the continuing benefit of the American people, encourages a cooperative partnership-based approach to natural resource management. When Doyon, a large landowner in several Alaska refuges, approached the Service with a proposal for a fee-title land exchange within the Refuge, we were interested enough to negotiate an Agreement in Principle. Now, the Service must evaluate whether the proposed land exchange would benefit the Refuge and satisfy our statutory responsibilities in addition to providing Doyon with lands that could contain oil and gas.

Our, and Doyon's, reasons for considering the exchange are listed below. If the action would support an objective previously identified in another plan or mission statement, the source is identified in parentheses. Indicators are provided for Service project-specific and Doyon goals that are used in Chapter 2 to assess the responsiveness of proposed alternatives to these goals.

1.3.2.1 Service Goals for the Project:

- Increase the total amount of public lands managed in accordance with the Refuge purposes (as described in ANILCA § 302[9][B]) and the National Wildlife Refuge System mission.
Indicator: acres of land managed according to Service mandates and policies.

- Add priority wildlife habitats to the Refuge (habitat objective, Yukon Flats Land Protection Plan [Service 1997:35]).
Indicator: acres of habitat.
- Consolidate land ownership patterns in the Refuge (land management objective, Yukon Flats Land Protection Plan [Service 1997:35]; and Yukon Flats Comprehensive Conservation Plan [Service 1987:xi]).
Indicator: length (miles) of boundary lines between Native and Refuge lands. As Native and Refuge lands are consolidated into larger blocks, the length of the boundary line between Native and Refuge lands would decrease.

The proposed land exchange, however, would not prevent Doyon from exploring and developing oil and gas resources on other lands it owns within the Refuge boundaries. If Doyon develops the core lands, the resulting infrastructure could increase the cost-effectiveness of developing oil or gas fields on other Native lands within the Refuge. This EIS must analyze whether the proposed land exchange would meet Service goals.

1.3.2.2 General Service Goals

The Service must ensure that any land management action it undertakes, including a land exchange, will promote the Refuge purposes specified in ANILCA and the mission of the National Wildlife Refuge System. Therefore, this EIS will analyze whether the proposed land exchange would enhance our ability to fulfill the purposes of the Refuge, the mission of the National Wildlife Refuge System, and other Service mandates, including:

- To conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to canvasbacks¹ and other migratory birds, Dall's sheep, bears, moose, wolves, wolverines and other furbearers, caribou and salmon.
(Refuge purpose; ANILCA § 302[9][B][i]).
- To fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats.
(Refuge purpose; ANILCA § 302[9][B][ii]).
- To provide, in a manner consistent with the purposes set forth in ANILCA subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents.
(Refuge purpose; ANILCA § 302[9][B][iii]).
- To ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in ANILCA paragraph (i), water quality and necessary water quantity within the Refuge.
(Refuge purpose; ANILCA § 302[9][B][iv]).
- To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.
(National Wildlife Refuge System Mission Statement; 16 USC 668dd[a][2]).

¹ Scientific and common names of plants and animals given in this EIS are provided in **Appendix B**.

- To provide for the conservation of fish, wildlife, and plants, and their habitats within the National Wildlife Refuge System.
(National Wildlife Refuge System Improvement Act of 1997; 16 USC 668dd[a][4][A]).
- To maintain the biological integrity, diversity, and environmental health of the Refuge.
(National Wildlife Refuge System Improvement Act of 1997; 16 USC 668dd[a][4][B]).
- To plan and direct the continued growth of the National Wildlife Refuge System in a manner that is best designed to accomplish the mission of the National Wildlife Refuge System, to contribute to the conservation of the ecosystems of the United States, to complement efforts of States and other Federal agencies to conserve fish and wildlife and their habitats, and to increase support for the System and participation from conservation partners and the public.
(National Wildlife Refuge System Improvement Act of 1997; 16 USC 668dd[a][4][C]).
- To facilitate compatible wildlife-dependent recreational uses within the Refuge.
(National Wildlife Refuge System Improvement Act of 1997; 16 USC 668dd[a][4][E]).

1.3.2.3 Doyon Goals for the Project

Doyon has different reasons than the Service for pursuing a land exchange. Doyon is one of the 13 Native regional corporations established by Congress under the terms of ANCSA. As an Alaska Native regional corporation, Doyon has revenue sharing requirements with Alaska Native Village and other regional corporations under Section 7 of ANCSA, a requirement that is not applicable to non-Native corporations. Consistent with the requirements, purposes, and intent of ANCSA, Doyon's mission is to promote the economic and social well-being of its tribal shareholders and future shareholders, to strengthen the Native way of life, and to protect and enhance its land and resources. The actions taken by Doyon to work with the Service in its development of the proposed land exchange are consistent with congressionally established purposes for an Alaska Native Corporation.

Doyon supports the proposed land exchange because it would provide a significant opportunity to promote the economic and social well-being of tribal shareholders and has the potential to provide monetary and job resources to the community for years to come. As an Alaska Native corporation, Doyon must balance responsible economic development with the need to protect the traditional lifestyle and culture of its Native shareholders. Doyon has a 30-year history of natural resource exploration on its lands and is interested in obtaining lands with oil and gas potential. Doyon currently owns 1.055 million or more acres of land with oil and gas potential within the Refuge. However, the deepest part of the sedimentary basin that underlies the Yukon Flats, and one of the most promising areas for oil and gas exploration in the Yukon Flats, is partially under Refuge lands. Doyon proposes to exchange lands with the Service to acquire this deep-basin area. The exchange could enable Doyon to:

- Fulfill the ANCSA requirement to provide economic opportunities for Doyon and its shareholders (PL 92-203; Mission Statement, Doyon, Limited).
Indicator: jobs created and contributions to local economies.
- Create a rural economy that would enable more people to live and work in their traditional villages rather than emigrating to urban centers.
Indicator: number of local rural residents employed.
- Consolidate landownerships in the Yukon Flats Basin.
Indicator: length (miles) of boundary line between Native and Refuge land. As Native and

Refuge lands are consolidated into larger blocks, the length of the boundary line between Native and Refuge lands would decrease.

1.4 Consistency with Laws, Regulations, Other Environmental Impact Statements, and Guidance Documents

1.4.1 Exchange Authority

The Service has land exchange authority under several different statutes. The National Wildlife Refuge System Administration Act of 1966, as amended [16 USC 669d(e)(3)], authorizes the Secretary of the Interior (Secretary) to acquire lands through equal-value land exchanges. In Alaska, both ANCSA and ANILCA specifically granted land exchange authority to the Secretary. Section 22(f) of ANCSA, as amended, authorizes the Secretary to exchange lands or land interests with village or regional corporations, individuals, or the State of Alaska to consolidate land ownerships, or to facilitate management or development. Section 1302(h) of ANILCA authorizes the Secretary to exchange lands or land interests with village or regional corporations, Native groups, urban corporations, other municipalities and corporations or individuals, the State, or any Federal agency to carry out the purposes of ANILCA. Both ANCSA and ANILCA specify that the exchanged lands or interests must be equal in value, unless the Secretary determines it would be in the public interest to proceed with the exchange in spite of unequal values.

Service policy (342 FW 5) requires the approval of the Director of the U.S. Fish and Wildlife Service (Director) for acquisition of lands by exchange. In addition, if the lands being divested or acquired are worth more than \$2,000,000, the exchange proposal must be sent to the House and Senate Committees on Appropriations for a 30-day review period before the Service is authorized to complete the exchange (Congressional Record HR 110-187, June 11, 2007).

1.4.2 Title XI of ANILCA

Congress recognized that Alaska's transportation and utility systems were largely undeveloped in 1980 when ANILCA passed into law. To provide for the future growth of Alaska's system of roads, pipelines, powerlines, railways, etc., Congress included a process in ANILCA for routing these systems across refuges and other conservation lands in Alaska.

Oil and gas exploration and development could occur on lands owned by Doyon, with or without a land exchange. Areas identified as having the potential for oil and gas total 2.9 million or more acres within the Refuge. Currently, Doyon is promoting exploration on its lands inside the Refuge, which includes 1.055 million or more acres with oil and gas potential. If Doyon develops oil or gas, either on land it currently owns or on the lands proposed for exchange, they would need a pipeline to get the product to market. The pipeline and support road would likely cross Federal lands to connect to the Trans-Alaska Pipeline System (TAPS). To construct a road or pipeline across Federal land, Doyon must obtain a right-of-way (ROW) permit under Title XI of ANILCA (43 Code of Federal Regulations [CFR] 36). Federal agencies must provide adequate and feasible access to landowners like Doyon, who are effectively surrounded by public land, but may impose reasonable regulations to protect resources (ANILCA §1110[b]; 43 CFR 36.10).

Title XI provides a comprehensive statutory authority for approving transportation/utility system ROWs. The process is intended to minimize the adverse impacts of siting these systems on or across conservation lands and requires a complete NEPA analysis (ANILCA §1104 (e));

43 CFR 36.6). The NEPA analysis would require detailed, site-specific information about the location, size, and design of the proposed road and pipeline, and would address impacts of the entire project, including the oil or gas field development. The analysis would tier to this Final EIS if actions associated with the ROW were related to actions analyzed in this EIS.

1.4.3 Environmental Impact Statements

1.4.3.1 Yukon Flats National Wildlife Refuge Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review

Proceeding with the proposed land exchange would require amending the Wilderness recommendation in the *Yukon Flats National Wildlife Refuge Comprehensive Conservation Plan, Environmental Impact Statement and Wilderness Review* (CCP; Service 1987a). Wilderness areas, which are designated by Congress, are defined by the Wilderness Act of 1964 as places “where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.” The Refuge CCP was developed by an interdisciplinary team following a thorough public review process. It provides long-range management direction and guidance for the Refuge and recommends Wilderness designation for about 658,000 acres of Refuge land in the White Mountains and the Crazy Mountains along the southern boundary of the Refuge (U.S. Fish and Wildlife Service 1987a:167). The proposed land exchange would trade about 26,500 acres of these lands to Doyon. Although the Wilderness recommendation was presented nearly 20 years ago, the U.S. Department of Interior (DOI) has taken no steps to complete the designation process. These additional steps would include a Secretarial recommendation, an Act of Congress, and the President’s approval. Although these lands have no official designation, the signed decision to recommend them as Wilderness is binding under the current CCP. If the Service chooses to exchange some of these lands, the Record of Decision for this EIS would include an amendment to the CCP (under authority of 94 Statute 2371 and 16 USC 668dd-668ee) to exclude these 26,500 acres from the recommendation for Wilderness designation.

The CCP also addresses oil and gas development on Refuge lands. Current management direction does not allow oil and gas leasing and associated development (U.S. Fish and Wildlife Service 1987a:169). Future oil and gas leasing could occur on non-Wilderness Refuge lands only if the Service determines that oil or gas development is an appropriate use of Refuge lands and is compatible with the purposes of the Refuge, and the Secretary determines it to be in the national interest. Any future oil or gas development activities on Refuge lands would require amending the CCP. During this process, the Service would seek the views of state and local governments and other interested parties and U.S. citizens, in accordance with Section 1008(b)(2) of ANILCA. Private lands within the Refuge boundaries do not have similar constraints and may be developed at the landowner’s discretion, in accordance with existing State and Federal laws and regulations. The proposed land exchange would transfer ownership of some of the prospective development areas of the Refuge to private ownership.

1.4.3.2 White Mountains National Recreation Area Resource Management Plan/Environmental Impact Statement

If Doyon were to produce oil or gas on lands received through the proposed land exchange, a pipeline and support road would be required to get the product to market. In accordance with ANILCA §1110(b), Doyon must be allowed adequate and feasible access to their land. Doyon’s preferred access route is through the White Mountains National Recreation Area (WMNRA), although alternative routes cross Refuge land.

The WMNRA was created by ANILCA in 1980 to provide public outdoor recreation and to conserve scenic, historic, cultural, and wildlife values, although other uses may be allowed if they are compatible with the values that contribute to public enjoyment. As discussed in Section 1.4.2, Doyon must obtain a ROW permit under the authority of Title XI of ANILCA before constructing a pipeline and road through either the WMNRA or the Refuge. The permitting process would require an EIS that analyzes the site-specific impacts from a range of reasonable routes, not just Doyon's preferred route. Collectively, the agencies (Bureau of Land Management [BLM] and the Service) must allow Doyon to access their land, but impacts could be minimized by issuing a ROW permit for the least-impacting route and imposing reasonable regulations to protect resources.

The WMNRA Resource Management Plan provides long-range management direction and guidance. A pipeline and road ROW through the WMNRA is not consistent with the current Resource Management Plan. Making the plan consistent would require a complete revision of the plan through a NEPA process. Doyon's preferred route would cross the Primitive Management unit of the WMNRA. This unit contains the highest scenic quality of the WMNRA and is managed to protect remote primitive values. These values include scenic vistas, pristine areas with virtually no evidence of human improvements, hunting and fishing opportunities, and outstanding opportunities for winter use of remote backcountry. The presence of a pipeline and road would alter the primitive character of this area. In addition, the Record of Decision for the Resource Management Plan established two transportation corridors in the southern part of the unit and stated that all future ROWs will, as far as possible, be located within one of these two corridors. Doyon's preferred route is not within either corridor.

1.4.4 Guidance Documents

1.4.4.1 Yukon Flats Land Protection Plan

In 1997, the Service developed a "Land Protection Plan" for the Refuge (U.S. Fish and Wildlife Service 1997). The Service does not own all of the priority wildlife habitats within the exterior boundary of the Refuge. The Land Protection Plan sets priorities and provides guidelines for working with private landowners to protect these habitats. This plan identifies priority wildlife habitats on private lands. When we began exchange negotiations with Doyon, we considered the Land Protection Plan, but used more recent biotic and abiotic information to help decide which tracts of Doyon lands we wanted to acquire.

1.4.5 Submerged Lands

The proposed land exchange area includes nearly 33,000 acres of ponds, lakes, and portions of streams and rivers. The BLM has determined that about 42% of the submerged lands beneath these water bodies belong to the State of Alaska or private landowners (other than Doyon) and would be excluded from the exchange. References in this EIS to the number of water bodies and to the acreage of water bodies (water surface area and/or submerged land area) are not absolute. Acreages are calculated using the best available data (e.g., derived from federal Master Title Plats [MTP] in surveyed townships, and from the National Hydrological Dataset [NHD] in unsurveyed townships). Water acreages derived from MTPs and the NHD often differ from one another. Further, the ambulatory nature of water body boundaries may change legal property boundary locations and may increase or decrease surface water or submerged land acreages shown in this EIS. References to water surface area and submerged land area in text, tables, and figures of this document should not be considered definitive.

In general, ownership of submerged lands depends on whether the water body is navigable, using criteria based on long-established Federal case law. If the water body is “non-navigable,” the upland landowner(s) owns the bed of the water. If the water body is “navigable,” the State of Alaska owns the submerged lands, unless withdrawn and reserved by the United States before statehood. Submerged lands beneath navigable waters were granted to the State at statehood by the provisions of the Equal Footing Doctrine (*Pollard v. Hagen*, 44 U.S. 212 [1845]), the Submerged Lands Act of 1953 (43 USC 1301 et seq.), and the Alaska Statehood Act of 1958 (72 Statute 339).

The BLM is the Federal agency authorized to convey public lands to ANCSA corporations, Native allottees, and other private landowners. For the purposes of these conveyances, the acreage of land underlying lakes of 50 acres or more, rivers 198 feet or more in width, and all navigable bodies of water are excluded from the total acreage tally. Even though the acreage is not charged against the entitlement, the landowner may own all or part of the submerged lands if the water body is non-navigable. These land/water boundary survey standards are not unique to Alaska; the BLM applies these same standards to conveyances throughout the United States (Bureau of Land Management 1973).

Whenever the BLM conveys land, it must determine whether any associated water bodies meet navigability criteria. If navigable, the submerged lands (below ordinary high water) belong to the State. If not, the adjoining upland landowner(s) owns the submerged land to a stream’s mid-line, a lake’s mid-point, or the entire bed if the upland landowner owns all the adjacent land.

At the time of conveyance, the BLM had made navigability determinations for all water bodies on lands conveyed to Doyon from the public domain. Therefore, we knew which submerged lands would transfer from Doyon to Federal ownership in the exchange. However, we did not know which submerged lands would transfer from Federal ownership to Doyon. In May 2006, we asked the BLM to research and prepare navigability determinations for all water bodies on Federal lands within the proposed land exchange area. The BLM completed navigability determinations for these water bodies during the spring and summer of 2006 (Bureau of Land Management 2006a, b). The beds of navigable water bodies belong to the State and would be excluded from the proposed land exchange. Also excluded would be the beds of non-navigable water bodies belonging to Native allottees or other private parties. In total, the BLM determined that about 14,035 acres of submerged lands belong to third-party interests and would be excluded from the exchange. The majority of these lands are within the area to be acquired by the Government.

If the exchange proceeds, the ownership of submerged lands could be challenged in a Federal court of law. If ownership is contested, the issue can be resolved through quiet-title actions in Federal courts or by Recordable-Disclaimer-of-Interest-in-Land (RDI) decisions by the DOI. Both options can be time-consuming, and the former can be quite expensive. An RDI is a legal document stating that the United States has no ownership interests in the land in question. The RDI process is an administrative means to clear title to submerged lands when both the State and the BLM concur the overlying water body was navigable at statehood and not withdrawn by a pre-statehood withdrawal.

Because the State of Alaska is the most likely entity to challenge BLM’s navigability determinations, we asked the State to review the list of water bodies. The Alaska Department of Natural Resources (ADNR) disagreed with BLM’s conclusions in several cases. In particular, the State considers many of the large lakes in the exchange area to be navigable whereas the BLM determined them non-navigable (Alaska Department of Natural Resources 2007a, b, c, d). **Table**

1-1 shows eight selected water bodies for which the State does not agree with BLM determinations of non-navigability. In addition, the State indicated it may assert ownership of submerged lands it currently considers non-navigable if it finds future evidence of navigability. The implication is that submerged lands traded in the exchange might later be claimed by the State of Alaska. There are no provisions in the Agreement in Principle for either party to compensate the other if a Federal court (or RDI) should decide the State of Alaska is the rightful owner of the submerged land. Therefore, the Service and Doyon could end up with less acreage than anticipated under the terms of the Agreement in Principle.

All submerged lands determined to be non-navigable by BLM along with the adjacent uplands would be included in the total land values. As with the uplands, the appraised value of the submerged lands would be affected by the potential oil and gas resources underlying them.

1.4.6 Drainage of Federal Oil

Development on Doyon-owned lands could drain oil and gas resources from adjacent Refuge lands. Federal regulations require producers to use methods that maximize the volume of oil and gas recovered. If the oil or gas reservoir spans both private and Federal lands, drainage from the adjacent Federal estate could result.

In cases where a leased well on public lands is draining adjacent unleased oil on Federal lands, there are two avenues of recourse (43 CFR Section 3162.2-2[b] and [c]). The Government may either: (1) enter into an agreement with the owner of the producing well to compensate the Government for the drainage, or (2) the Government may choose to lease the lands being drained. The lessee would pay royalties to the Government for the right to drill on Federal land. Traditionally, most of the funds generated by these royalties have gone directly into the general U.S. Treasury.

The case in the Yukon Flats National Wildlife Refuge, however, would be somewhat different. A well on Doyon lands would not be operating under a Federal lease, so it is unclear how the Government could persuade Doyon to compensate the Government for the drainage. Therefore, if a well on Doyon lands were to drain the adjacent Federal estate, the Government's recourse would be to lease the Federal lands and curb drainage by drilling off-set wells. Statutory prohibitions against leasing do not apply when the Federal estate is being drained. According to 43 CFR 3100.0-3(d), if oil or gas is being drained from lands otherwise unavailable for leasing, there is implied authority in the agency having jurisdiction of the lands to grant authority to the BLM to lease those lands.

1.5 Decisions to be Made

The U.S. Fish and Wildlife Service Regional Director, Alaska Region, must decide if the proposed land exchange meets the purposes of the Refuge as described in ANILCA and whether or not the Service should proceed with a land exchange with Doyon. This EIS will provide the Regional Director with an analysis of the environmental, cultural, and socioeconomic impacts of the proposed land exchange, two other action alternatives, and a No Land Exchange (No Action) alternative, and will compare the potential impacts of implementing each alternative. The action alternatives differ in the acreage and types of land interests (i.e., fee title or non-development easements) that would be exchanged. If the Regional Director decides to proceed with an exchange, he also must decide on the scope and extent of the exchange, including stipulations or mitigation measures necessary to protect Refuge resources.

Table 1-1 Selected water bodies with federal determinations of non-navigability disputed by the State of Alaska¹

Waterbody²	Location³	Size (acres)⁴	Village in Vicinity of Waterbody	Adjacent Private Parcel⁵	Transferee
Unnamed lake ⁶	Township 14 North, Range 8 East, Fairbanks Meridian (FM)	750	Birch Creek	Yes	Doyon
Fishnet Lake	Township 16 North, Range 6 West, FM	249	Stevens Village	Yes	Service
Nelson Lake	Township 19 North, Range 1 West, FM	1,005	Beaver	Yes	Service
Little Black River	Sections 31-33 only, Township 19 North, Range 19 East, FM	51	Chalkytsik	Yes	Service
Long Lake	Township 19 North, Range 1 West, FM	522	Beaver	No	Service
Tiinkdhul Lake	Township 20 North, Range 21 East, FM	2,262	Chalkytsik	Yes	Service
Unnamed lake	Sections 3-5 and 8-9, Township 17 North, Range 7 East, FM	431	Birch Creek	No	Service
Unnamed lake	Sections 5-8, Township 17 North, Range 7 East, FM	277	Birch Creek	Yes	Service

Notes:

¹ Navigability, for purposes of establishing title ownership (as defined by Federal case law criteria), determines who owns the submerged lands beneath these and other water bodies affected by the proposed land exchange. If navigable, the State owns the submerged lands as of the date of Alaska statehood. If non-navigable, the adjacent upland land owner (e.g., the United States, a Native allottee, or a village corporation), owns the submerged lands. In 1980, for purposes of title ownership, the BLM began making Federal navigability determinations for water bodies within the exchange area as part of the ANCSA land transfer process. At the request of the Service in 2006, the BLM made navigability determinations for the remainder of water bodies in the exchange area lacking Federal determinations. In response to a Service query of November 8, 2005, the State of Alaska’s Public Access Assertion and Defense Unit listed these and other water bodies as navigable (correspondence of April 11, 2007).

² These listed water bodies are some of the numerous streams, rivers, and lakes within the exchange area where submerged land ownership may be contested in the future.

³ Water bodies may extend into adjacent, unlisted townships. Sections are listed for three water bodies to assist in identification.

⁴ Lake acreage based on U.S. Geological Survey National Hydrography Dataset (NHD), March 2008. A portion of the lake acreage listed may lie outside the land exchange area (e.g., Fishnet, Tiinkdhul, and Burman lakes). Lake acreages derived from NHD data may not conform to acreages derived from Federal Master Title Plats.

⁵ This column indicates existence of small, private property, upland parcels within the exchange area immediately adjacent to the referenced waterbody. If the water is non-navigable, these small parcel owners own a portion of the lake bed or river bed with other upland owners.

⁶ Locally known as Burman Lake.

No sooner than 30 days after the U.S. Environmental Protection Agency (EPA) publishes the Notice of Availability of the Final EIS, the Service will prepare a Record of Decision. The Service will consider public comments on the Final EIS when preparing the Record of Decision. The Record of Decision will include:

- An explanation of the decision, including a discussion of the factors that influenced the decision;
- A summary of the alternatives;
- Identification of the environmentally preferable alternative; and
- Necessary mitigation measures or an explanation of why mitigation measures were not adopted.

If the Regional Director decides to proceed with the exchange, the Service and Doyon would negotiate a final exchange agreement. Before a final exchange agreement could be negotiated, a land appraisal would have to be completed for the project to ensure an equal value exchange. The exchange could proceed only if both parties agree to the terms specified in the agreement. Either party could terminate the exchange agreement if they believe it is in their best interests to do so. If both parties wish to proceed, the Regional Director would forward the exchange agreement to the Director of the U.S. Fish and Wildlife Service with a recommendation that he/she sign the exchange agreement. If signed by both the Director and Doyon, the exchange agreement and supporting documentation would be forwarded to Congress for a 30-day review.

1.6 Cooperating Agencies

The BLM is a cooperating agency for the project in accordance with NEPA regulations at 40 CFR 1508.26. Cooperating agencies either have discretionary authority, jurisdiction by law, or special expertise. The BLM has technical expertise in oil and gas exploration and development.

The BLM also administers lands adjacent to the Refuge boundary that could potentially be affected by future development, including a road and pipeline ROW. In addition, if the exchange proceeds, Doyon would reallocate approximately 56,500 acres of 12(b) selections to villages outside the Refuge. Most of these reallocations would involve BLM-administered lands.

1.7 Public Involvement, Scoping, and Significant Issues

1.7.1 Public Involvement: Pre-Scoping

In the 2 years preceding release of the Agreement in Principle, Doyon leadership and its staff met with village Tribal leaders and village corporation board members to discuss the proposed land exchange and solicit input that could be used to negotiate an agreement that addressed local concerns (Mery 2006). In late 2004, Doyon held the first of three Fairbanks-based meetings with Yukon Flats Village Corporation and Tribal leaders to discuss the proposed land exchange, focusing on local economic opportunities.

On November 22, 2004, the Service released the Agreement in Principle to the public. Three months later, the Service released the Evaluation and Review of a Proposed Land Exchange and Acquisition of Native Lands (U.S. Fish and Wildlife Service 2005), a document that explored the management implications and potential environmental impacts of the proposed land exchange.

The Service, in collaboration with Doyon, solicited input on the proposed land exchange by placing notices in the principal daily newspapers in Anchorage and Fairbanks, issuing two joint Doyon-Service news releases to Alaska media offices, distributing a newsletter, posting information on the Service's Alaska web site, and holding public meetings. The Service held meetings in Anchorage, Arctic Village, Beaver, Birch Creek, Central, Chalkyitsik, Circle, Fairbanks, Fort Yukon, Stevens Village, and Venetie during January through March 2005 and received 7,810 comments during a 6-month comment period.

We received comments in person, by electronic mail (e-mail), standard mail, or facsimile. The majority (6,866) were submitted by e-mail.

Major issues identified during pre-scoping were:

- Would the exchange conflict with Refuge purposes or the Service mission to conserve fish and wildlife habitats?
- How would oil and gas development affect the Yukon Flats and the environment in general?
- How would the proposed land exchange affect local communities and subsistence resources and opportunities?
- How would the proposed land exchange affect special designation areas such as the recommended-Wilderness area, the Beaver Creek National Wild River, and the WMNRA?
- Is enough information (land appraisals, biological data) available to make an informed decision about the proposed land exchange?
- How would the proposed land exchange affect local, state, and national economies?
- Should Doyon, or any Native corporation, sell or trade Alaska Native lands?
- Would the exchange simplify management and increase the amount of lands conserved for wildlife?

1.7.2 Public Involvement: Scoping

The Service began this EIS process by publishing a Notice of Intent in the Federal Register on October 19, 2005 (Federal Register, Volume 70, Number 201, Pages 60845-60846). The Notice of Intent summarized the major issues, the Agreement in Principle, and draft alternatives.

A separate notice published on March 3, 2006 (Federal Register, Volume 71, Number 42, Page 10988), announced our plans to hold open-house scoping meetings in nine local villages and listed the date, time, and venue of meetings scheduled for Anchorage and Fairbanks. Scheduling mid-winter meetings in remote Alaska villages is highly dependent on local weather conditions and other village commitments and activities. Because these schedules were likely to change, we did not publish dates and times in the Federal Register. Instead, we announced village meetings in a project newsletter sent to all village box holders and mail-list recipients, and distributed flyers to Tribal offices 1 week prior to the meeting date.

We also advertised the meetings through the local media by issuing a news release and publishing meeting announcements in the *Anchorage Daily News* and *Fairbanks Daily News Miner*. The day before each meeting, announcements were broadcast three times over a local radio station (KZPA 900 AM Fort Yukon, KUAC 88.9 FM Fairbanks, or KSKA 91.1 FM Anchorage). The stations

repeated the broadcast twice on the day of the meeting. The Anchorage radio station could not guarantee the announcement would be broadcast, but they did publish the meeting announcement on their on-line calendar of events. The Refuge Manager and EIS Project Coordinator also participated in a call-in radio show on KZPA 900 AM Fort Yukon sponsored by the Council of Athabascan Tribal Governments (CATG).

During the scoping period, February 23 to April 15, 2006, we received a total of 164 submissions from which 770 individual comments were extracted. We received oral comments at public meetings or recorded on a toll-free phone line, and written comments through the U.S. mail, or submitted electronically from the project web site. The majority of the comments were oral (51%), followed by comments received by mail (24%). More information about the scoping process is available in the Scoping Summary Report (ENSR 2006a) and the Scoping Newsletter. Both are posted on the project web site, <http://yukonflatseis.ensr.com>.

1.7.2.1 Key Issues during Scoping

During the scoping process, we identified a number of issues that are analyzed in detail in this EIS. Most of the public comments focused on the potential impacts of oil and gas development within the Refuge boundaries, rather than on the land exchange itself. Therefore, much of this EIS focuses on development impacts. Oil field development would be confined to private land, although access corridors could cross public land. Oil development on private lands in the Refuge does not hinge on a land exchange occurring. As discussed in Section 1.3.1.3, Doyon currently owns 1.055 million or more acres of land with oil potential, and could potentially develop these current landholdings and/or lands obtained by exchange.

Specifically, this EIS addresses how the proposed land exchange and several alternatives could affect:

- Fish and wildlife;
- Wetlands and aquatic habitats;
- Physical environment (water quality and quantity, hydrology, air quality, climate);
- Subsistence;
- Cultural/archeological resources;
- Socioeconomics;
- Refuge purposes;
- Biological integrity, diversity, and environmental health;
- Land use (including special designation areas, recreation, visual resources);
- Vegetation;
- Environmental justice (including human health); and
- Access.

The relevant issues are briefly described below. Chapter 2 contains a table (**Table 2-5**) that summarizes and compares the alternatives and their potential effects on these resources.

Fish and Wildlife. A primary purpose of the Refuge is conserving fish and wildlife populations and habitats in their natural diversity. A common concern identified during scoping was that subsequent oil and gas field development on Doyon lands might have detrimental effects on local fish and wildlife populations. There is concern that increased human activity, noise levels, oil spills, and infrastructure (production facilities, roads, pipelines) could affect the health, distribution, migration patterns, or population size of species using the Refuge.

Wetlands and Aquatic Habitats. The Yukon Flats wetlands are highly productive and biologically diverse systems. In addition to supplying important habitat for fish and wildlife, wetlands provide multiple ecological functions. Wetlands function as natural sponges, storing water and releasing it slowly. This reduces erosion and flood heights, and facilitates groundwater recharge. Wetlands also serve as filtration systems. Suspended sediments, nutrients, and pollutants settle to the wetland floor where they can be absorbed by plant roots, broken down by microorganisms, or simply adhere to soil particles. The vast network of wetlands in the Yukon Flats stores and filters a tremendous amount of water.

Executive Order (EO) 11990 (*Protection of Wetlands*) directs Federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance their natural and beneficial values. There is concern that oil and gas development or oil spills could degrade wetlands by altering the hydrology of the area or increasing pollution loads beyond wetland filtration capacities.

Some local residents are concerned that pollutants would enter rivers and streams and be carried far from their source. Others believe that increased water consumption at production facilities would exacerbate a trend toward lower water levels on the Refuge.

Physical Environment. The physical environment of the Refuge is largely unaltered from historical conditions and supports healthy populations of fish, wildlife, and plants. Yukon Flats residents depend on this relatively pristine environment for their subsistence needs. Some local residents are concerned that oil and gas development, related infrastructure, or subsequent oil spills would affect air quality, climate, water quality or quantity, or hydrological processes. Others are concerned that development in one area would lead to satellite developments and a “spider-web” of connecting roads and pipelines that could fragment habitats and alter natural fire regimes (through increased suppression), hydrological regimes, or other physical processes.

Subsistence. The residents of the Yukon Flats engage in a variety of subsistence activities, including hunting, fishing, trapping, berry picking, and gathering plants and firewood. Subsistence is a way of life in these communities and is vital to the preservation of Tribal cultures and economies. Many residents are concerned about the potential for increased pollutants and questioned how these might affect the health of fish or animal populations or contaminate the food chain. Others fear that development might bring an influx of outsiders to the area, increasing competition for subsistence resources. Some residents argue that the best way to protect subsistence resources is to keep land under Native control and avoid any loss of Native lands (through sale or exchange).

Cultural/Archaeological Resources. Federal laws (National Historic Preservation Act of 1966 [NHPA] and the Archaeological Resources Protection Act of 1979) require agencies to consider the effects of their actions on significant cultural resources and archaeological and historic sites. The Service is committed to protecting these resources on any lands acquired through purchase or

exchange. However, the potential exists for future oil and gas development and transportation ROWs to lead to disturbance of local historical, cultural, or archeological sites.

Socioeconomics. The communities in the Yukon Flats support a mixed subsistence/cash economy. Most residents rely on hunting, fishing, and gathering to obtain food and materials for their own use or to share with others. Many local residents question how an oil and gas development project on the core lands would affect the local economy and the traditional Native way of life. Some think future development would provide long-term social and economic benefits to local communities and help preserve their way of life. Others are concerned that the benefits would be short-term, would not be realized at a local level, or would come at a high cost in terms of social impacts or health issues.

Refuge Purposes. The National Wildlife Refuge System Administration Act, as amended, clearly states that each refuge shall be managed to fulfill the specific purposes for which that refuge was established. All our actions should be guided by this directive. Some comments questioned how the proposed land exchange would affect the Service's ability to fulfill its mandates and conserve the species and habitats of the Refuge. Others suggested that the land exchange would enable the Service to obtain and conserve more of the habitats important to migratory waterfowl and other waterbirds.

Biological Integrity, Diversity, and Environmental Health. The National Wildlife Refuge System Administration Act, as amended, clearly states that conservation of fish, wildlife, plants, and their habitats is the fundamental mission of the Refuge System. The Act directs the Service to maintain the biological integrity, diversity, and environmental health of the Refuge System for the benefit of present and future generations. Some are concerned that the exchange would split the Refuge into two disjunct halves, separated by a large contiguous block of private land. They question how this might affect the relatively undisturbed Yukon Flats ecosystem. Some are concerned that the exchange would lead to more development on other private parcels, increase habitat fragmentation and pollutants, increase access, and affect species diversity.

Land Use. The proposed land exchange could change land uses in the area. Some of the core lands are adjacent to the Beaver Creek Wild River corridor and the WMNRA. If Doyon subsequently develops the parcel, an access corridor potentially could be constructed across the WMNRA or the Refuge. In addition, the proposed land exchange would trade about 26,500 acres of land the Service recommended for Wilderness designation in 1987. Some people question how future development, including roads and pipelines, might affect these areas. Some of the concerns include noise and visual impacts, disrupted animal movement patterns (especially moose and Dall sheep), habitat fragmentation, increased pollution potential, and the loss of wilderness values.

Vegetation. Seismic exploration could require clearing some vegetation; oil and gas field development would disturb a larger area. Removing vegetation to build infrastructure, or periodically controlling vegetation along roads or pipelines could increase erosion, alter drainage patterns, cause habitat fragmentation, or affect rare or sensitive plants or subsistence foods. Some questioned how dust from a dirt road would affect the surrounding vegetation.

Environmental Justice. EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) directs Federal agencies to assess whether their actions would have disproportionately high and adverse human health or environmental effects on minority and low-income populations. Some Yukon Flats residents are concerned that pollutants from oil and gas development might ultimately affect human health. Some are

concerned that diminished air or water quality would increase the rates of asthma, cancer, or upper respiratory disease. Others believe oil development would lead to an increased contaminant load in the subsistence food base, ultimately creating human health problems.

Access. If Doyon were to develop their lands (either lands currently owned or received in the exchange), an access corridor potentially could be constructed across the Refuge or the WMNRA. A number of concerns were raised about the possibility of building an access road into this remote area. Some of the concerns centered on whether the road would be open or closed to public use. Others were concerned about how a road and pipeline corridor might affect wildlife, habitats, hydrology, the Beaver Creek Wild River corridor, or the WMNRA.

1.7.2.2 Issues Not Analyzed in Detail

Several issues identified during scoping will not be considered in detail in this EIS. For example, the State and Federal governments disagree on the ownership of certain submerged lands to be exchanged (see Section 1.4.5). If the Service decides to proceed with the exchange, the uncertainty on the title to these lands could lead to litigation unless ownership is resolved prior to conveyance. However, resolving ownership issues can be time-consuming and is unlikely to be completed before the release of this EIS. Rather than resolving ownership issues now, the Service and Doyon have agreed not to seek compensation from the other if submerged lands received in the exchange are later determined to be owned by the State of Alaska.

A list of other issues not analyzed in detail is included in the Scoping Summary Report (ENSR 2006a) posted on the project web site, <http://yukonflatseis.ensr.com>. In general, these issues were either:

- Beyond the scope of this EIS or not specific to the proposed project (e.g., to evaluate alternative energy sources or ecotourism, rather than pursuing an exchange that could result in oil development);
- Beyond the Service's jurisdiction (e.g., to have Doyon set up a land trust and natural resources trust fund on behalf of shareholders to conserve and protect Native interests); or
- A general opinion of the proposed project, the Service, or the Government (e.g., the opinion that the project would not be viable under a different administration).

1.8 Public Review and Comment on the Draft EIS

The Notice of Availability of the *Proposed Land Exchange Yukon Flats National Wildlife Refuge Draft Environmental Impact Statement* was published in the Federal Register on January 25, 2008 (Federal Register, Volume 73, Number 17, Pages 4617-4619). The public comment period was originally scheduled from January 25 through March 25, 2008; however, a notice reopening the public comment period from April 17 through May 19, 2008, was published in the Federal Register on April 18, 2008 (Federal Register, Volume 73, Number 75, Page 20931). Public notices announcing the comment period were placed in newspapers with circulation in or near locations where public meetings were held. The Service issued a news release on February 4, 2008, notifying the public that the Draft EIS was available for public review, and listing the schedule for public comment hearings. The Service also issued a news release on April 14, 2008, notifying the public that the comment period had been reopened for 30 days. Information on the Draft EIS was also posted on the interactive website. The public was able to access the website to download a copy of the Draft EIS and the stand-alone Summary.

Public hearings were held in Steven Village on February 11; Beaver on February 12; Birch Creek on February 13; Venetie on February 15; Chalkyitsik on February 19; Fort Yukon on February 20; Fairbanks on February 21; Central on February 25; Circle on February 26, Arctic Village on February 27; and Anchorage on March 4, 2008. These hearings allowed the Service to provide an overview of the alternatives and record public comments and subsistence testimony.

The Service accepted all comments received from January 25 through May 19, 2008. Nearly 105,000 comments were received on the Draft EIS. Comments included letters, electronic mail, and oral or written comments from the public hearings. Volume II of this Final EIS contains a summary of the issues and includes agency responses to specific comments.

1.9 Federal/State Permits and Approvals Required to Implement the Land Exchange

If approved by the Regional Director, the proposed land exchange could proceed without additional Federal or State permits under the exchange authorities provided by the National Wildlife Refuge System Administration Act, ANCSA, and ANILCA. An exchange of this magnitude (land values exceeding \$2,000,000) also requires a 30-day Congressional review.

The Service is not required to prepare Compatibility Determinations for land exchanges. By regulation (50 CFR 25.12) and policy (603 FW 2.10 A), the Service requires a Compatibility Determination before permitting a new or expanded use of a refuge, but not for refuge management activities. Management activities are actions the Service takes to accomplish refuge purposes and the National Wildlife Refuge System mission. The proposed land exchange is a refuge management activity, not a refuge use.

Although no permits are required, the proposed land exchange would be subject to the various compliance requirements discussed below.

1.9.1 Executive Orders

Several EOs that lack specific permit requirements must be considered when a Federal agency proposes an action. The President of the United States has issued the following EOs that would apply to the proposed land exchange.

- EO 11988 and EO 11990 direct Federal agencies to minimize destruction, loss, or degradation of floodplains and wetlands, and to preserve and enhance the natural and beneficial value of floodplains and wetlands on Federal lands.
- EO 12898 directs Federal agencies to assess whether their actions have disproportionately high and adverse human health or environmental effects on minority and low-income populations.
- EO 13007 directs Federal agencies to avoid adversely affecting the physical integrity of Indian sacred sites and to accommodate access and ceremonial use of sacred sites.
- EO 13112 directs Federal agencies to take no action they believe is likely to cause or promote the introduction or spread of invasive (non-native) species, unless the benefits of the action clearly outweigh potential harm and no feasible or prudent alternatives exist.
- EO 13175 directs Federal agencies to consult with affected Tribal governments for any action that has substantial direct effects on one or more Indian tribes.

- EO 13186 directs Federal agencies to take actions to promote the conservation of migratory bird populations.
- EO 23212 directs Federal agencies to expedite their review of permits or take other actions as necessary to accelerate the completion of energy-related projects, while maintaining safety, public health, and environmental protection.

1.9.2 Cultural Resources Compliance

Section 106 of the NHPA, as amended, and its implementing regulations at 36 CFR 800 require Federal agencies to consider the effects their actions may have on cultural resources. The proposed land exchange would transfer Federal lands into private ownership, possibly affecting the cultural resources on those lands. Regulations in 36 CFR 800.5(a)(2)(vii) define land exchanges as “adverse effects” requiring the agency to initiate consultations to resolve the adverse effect. The regulations require a five-step review process, which includes:

- Identify and evaluate historic properties;
- Assess impacts;
- Consult with interested parties, the State Historic Preservation Officer (SHPO), and NHPA Advisory Council to develop a mitigation strategy;
- Develop a Memorandum of Agreement and begin mitigation; and
- Proceed with project.

On January 19, 2005, the Service initiated consultation with the SHPO, who governs compliance with Section 106 regulations. At that time, the Service had no information on cultural resources within the 110,000-acre exchange parcel that would leave Federal ownership. In consultation with the SHPO, the Service contracted a study, consisting of archival and oral history research and a limited field inventory, to determine whether or not cultural resources were present. A report summarizing the findings was released in the fall of 2006 (McGraw 2006).

The bulk of the information in the report concerns the use of the exchange area for fur-trapping by non-Natives during the 20th century. A number of trapping cabins still exist and would likely qualify for the National Register of Historic Places. To obtain more information about the area, the Service is conducting additional field surveys and contracted a study of “Native place names,” both of which began in August 2008 and should be completed by the end of 2009. Place names can yield important information on the traditional Native history and use of an area. The Service archaeologist is continuing to work with the SHPO to satisfy NHPA Section 106 compliance requirements.

1.9.3 Subsistence Evaluation

Section 810 of ANILCA requires agencies to evaluate the effects on subsistence uses and needs when deciding whether to dispose of public lands in Alaska. If the action would significantly restrict subsistence uses, the agency must hold public hearings in the affected communities and seek ways to minimize the adverse impacts. Before proceeding, the agency must determine that the subsistence restriction is necessary and that the action is consistent with sound management principles and would involve the least amount of public land possible. The subsistence evaluation concluded that the effects of the actions would fall below the level of significantly restricting

subsistence uses and needs. The ANILCA Section 810 Subsistence Evaluation for the proposed land exchange is included in **Appendix C**.

1.9.4 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1855 [b]) requires Federal agencies to consult with the Secretary of Commerce (delegated to National Oceanic and Atmospheric Administration National Marine Fisheries Service [NMFS]) on any action, or Proposed Action, that may adversely affect Essential Fish Habitat (EFH).

The Service initiated consultation with NMFS in a letter dated February 21, 2007. The letter summarized the terms of the proposed land exchange, provided a map of the exchange lands, and disclosed the potential for subsequent oil development on the lands traded to Doyon. On March 13, 2007, the agency responded by electronic mail that consultation is not required for the proposed land exchange (Olson 2007). However, Doyon would need to obtain Federal permits before developing the exchange parcel. The EFH review would be part of the Federal permitting process.

1.10 Federal/State Permits and Approvals Required for Exploration and Development Activities

Any subsequent oil and gas exploration, development, and infrastructure construction would require additional State and Federal permits. Doyon or its agents would be responsible for obtaining all permits and approvals necessary for any exploration, construction, and production activities.

Many of the required permits and approvals stem from two major statutes, the Clean Water Act and the Clean Air Act. The following is a brief discussion of some applicable regulations and required permits; a more thorough list is presented in **Appendix D**.

1.10.1 The Clean Water Act

Oil and gas exploration or development activities affecting State waters or wetlands would be subject to a number of permits. Regulations promulgating the Clean Water Act (CWA) have resulted in permitting requirements administered by both State and Federal agencies. Under Section 404 of the Act, the U.S. Army Corps of Engineers requires a permit to discharge fill material in water and wetlands. Constructing gravel pads, roads, airstrips, or other structures in wetland areas would require a Section 404 permit. Applicants must identify the type and extent of wetlands affected, describe anticipated impacts, and devise mitigation measures. A State agency, the Alaska Department of Environmental Conservation (ADEC), certifies that the Section 404 permit issued by the U.S. Army Corps of Engineers meets State water quality standards.

The EPA issues National Pollution Discharge Elimination System permits required by the CWA. This permit program controls water pollution by regulating point sources that discharge pollutants into surface waters. Any discharge of effluent (e.g., drilling fluids, cooling water, wastewater, etc.) into surface waters, including wetlands, requires a permit. Applicants must describe existing water quality, the amount of water required for the project, expected pollutants and their concentrations, and the quality and locations of wastewater treatment facilities and discharges. The EPA also administers a number of other CWA mandates, although the permits are issued by

the ADEC. These include permits for Waste Water Authorization, Oil Discharge Prevention and Contingency Plans, and Storm Water Discharge.

1.10.2 The Clean Air Act

The Clean Air Act (CAA) provides the framework for national and state efforts to protect air quality. The EPA sets nationwide limits for air pollutants, but states may adopt stricter standards and are generally responsible for issuing permits. The EPA has delegated CAA permitting authority within the State of Alaska to the ADEC. Prior to obtaining a permit, operators must show that emissions will not cause concentrations of regulated air pollutants to exceed National Ambient Air Quality Standards and Alaska Ambient Air Quality Standards in areas where the public has access. Projected emissions and meteorological data are used to model the dispersion of pollutants and demonstrate compliance. Monitoring is required after the permit is issued. Any future oil and gas development would require modeling and a permit from ADEC.

The ADEC issues Prevention of Significant Deterioration (PSD) and Title V Operating Permits. PSD permits are required during construction to ensure that air quality does not degrade beyond minimum standards needed to protect public health and welfare. After operations commence, facilities must secure a Title V Operating Permit if they are a major generator of air pollution. This permit is intended to reduce violations and improve enforcement of air pollution laws by requiring pollution sources to report how they track and control emissions and to certify on a yearly basis that they are meeting permit requirements. The permits and the monitoring information are available for public review.

1.10.3 Other State Permits and Approvals

The ADEC is responsible for issuing several other permits and approvals for oil and gas exploration and development activities, including the storage and transport of oil, temporary drilling waste storage, and cleanup of spills.

The ADNR requires a water use permit if surface or well water is needed to support drilling and production activities. The Alaska Department of Fish and Game (ADFG) requires a Fish Habitat Permit for any activity within or impacting an anadromous water body, including building a road or pipeline across a stream important to spawning, rearing, or migrating anadromous fish species, or any stream that supports resident fish species.

The Alaska Oil and Gas Conservation Commission (AOGCC) requires a permit to drill for oil or gas anywhere in Alaska, including privately owned land. The AOGCC oversees the use of appropriate equipment and practices to maintain well control, protect groundwater, avoid waste of oil or gas, and promote efficient reservoir development. The AOGCC is responsible for reviewing and approving production, injection, and disposal plans for exploration and development activities.

1.10.4 Other Federal Permits and Approvals

The EPA requires a permit for underground injection of industrial waste materials. A common oil field practice involves re-injecting produced water and drilling muds into the well. This requires an Underground Injection Control Class I Industrial Well permit under the Safe Drinking Water Act (42 USC 300f). This Act was established to protect the quality of drinking water in the

United States and applies to all waters actually or potentially designed for drinking use, whether from aboveground or underground sources.

The Rivers and Harbors Act of 1899 (33 USC 401, et seq.) requires several permits to prevent unauthorized obstruction or alteration of navigable waters. The most frequently exercised authority is contained in Section 10 (33 USC 403), which prohibits the construction, excavation, or deposition of materials in, over, or under navigable waters, or any work that would affect the course, location, condition, or capacity of those waters without a permit from the U.S. Army Corps of Engineers.

Doyon would need permits from the Service for any work on Refuge lands. Access through Service lands, whether temporary or permanent, would require a ROW permit. Geological or geophysical exploration would require a compatibility determination and a Refuge special use permit issued by the Refuge Manager. As discussed in Section 1.4.2, constructing a road, pipeline, or other transportation or utility system across the Refuge or adjacent BLM land (the WMNRA) would require a Title XI ROW Permit (43 CFR 36) and a complete NEPA analysis (ANILCA §1104 [e]; 43 CFR 36.6) to analyze the site-specific impacts of the road and/or pipeline and oil or gas field development.

In addition, operators must have an approved oil spill response plan before constructing a crude oil pipeline. Under the Oil Pollution Act of 1990 and implementing regulations, the U.S. Department of Transportation would have jurisdiction over an oil pipeline transporting crude oil from any future development in the Yukon Flats to the TAPS. Requirements would include secondary containment for some facilities, pipeline valves, leak detection, and monitoring. The operator must prove it has the financial ability to pay for spill response and damages.

1.11 Organization of the EIS

The format and content of this EIS was guided by the Council on Environmental Quality regulations and the Service NEPA handbook. The EIS consists of the following two volumes:

VOLUME 1

1. Purpose of and Need for Action

Summarizes the purpose and need for the proposed land exchange, the major issues, and the decisions to be made.

2. Proposed Action and Alternatives

Describes and compares the Proposed Action and reasonable alternatives. Lists alternatives considered but rejected from detailed analysis.

3. Affected Environment

Describes the current condition of relevant resources in the project area and establishes the baseline for comparing the predicted effects of the alternatives.

4. Environmental Consequences

Analytically predicts and compares the consequences to relevant resources from implementing each alternative. The predictions include the direct, indirect, short-term, long-term, irreversible, irretrievable, and cumulative effects of each alternative.

5. Consultation and Coordination

Documents scoping, meetings, compliance with consultation requirements, and preparers of the EIS.

VOLUME 2

References

Lists the documents and other sources used to prepare the EIS.

Glossary

Contains useful definitions of terms found in the EIS.

Index

Provides a list of key terms and subjects discussed in the EIS and includes page numbers of where they are referred to in the text.

Appendices

Includes important documents concerning the land exchange, species list, and other information about the Refuge.

Public Comment Responses

Contains a summary of the issues raised by the public and agencies during the Draft EIS public comment period and includes Service responses to specific comments.