U.S. Department of the Interior
Bureau of Land Management

Steese

Record of Decision and Approved Resource Management Plan

Eastern Interior

December 2016

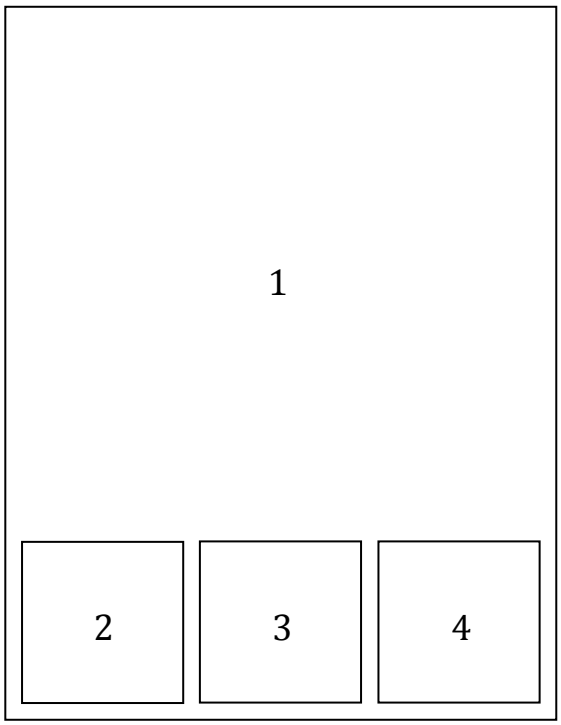
The Bureau of Land Management Today

Our Vision

To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

Our Mission

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.



BLM Cover Photos

1. South Unit of the Steese National Conservation Area
2. Campsite on a ridge near the headwaters of Thomas Creek
3. Caribou above Harrison Creek
4. Packrafter on Birch Creek Wild and Scenic River

BLM/AK/PL-17-002+1610+F0200

Eastern Interior Steese

Record of Decision and Approved Resource Management Plan

Prepared by the

U.S. Department of the Interior
Bureau of Land Management - Alaska
Eastern Interior Field Office

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1. Record of Decision

1.1 Introduction

The Bureau of Land Management (BLM) Steese Planning Area is located in eastern Interior Alaska and includes approximately 1,267,000 acres of BLM-managed public land administered by the Eastern Interior Field Office. This record of decision approves the attached Eastern Interior, Steese Approved Resource Management Plan. This decision and plan provide overall direction for management of all resources on BLM-managed lands within the Steese Subunit as described in the Eastern Interior Proposed Resource Management Plan/Final Environmental Impact Statement (RMP/EIS). Hereafter referred to as the Steese Planning Area. This Approved Resource Management Plan replaces the Steese RMP approved in 1986.

1.2 Overview of Proposed Resource Management Plan and Final EIS Alternatives

1.2.1 Alternatives Considered but Eliminated from Detailed Analysis

1.2.1.1 Livestock Grazing

The BLM did not analyze in detail an alternative that would manage lands in the planning area for livestock grazing because there is no foreseeable interest and it would not be practicable. There are currently no permitted livestock operations within the planning area. The grazing regulations for Alaska (43 CFR 4200) were removed in 1998 due to the lack of demand for permits and the lack of land suitable for grazing (63 FR 51853). The BLM does not anticipate any applications for livestock grazing in the future, unless it is grazing associated with Special Recreation Permits, such as hunting guides using horses. Grazing associated with recreation is permitted through the Recreation Program.

There are no identified areas with high grazing potential in the planning area. Livestock grazing on remote BLM lands is not practical due to potential conflicts with wildlife, lack of suitable grazing lands, the potential for predation on livestock, and the lack of access for livestock operators. Areas close to communities where grazing would be more practical are state or private lands.

1.2.1.2 Recommending Wilderness Designation by Congress

The BLM did not analyze in detail an alternative that would recommend wilderness designation within the planning area because it is beyond the scope of this planning effort. The BLM has conducted an inventory of the planning area to document lands with wilderness characteristics and has considered in this plan a full range of reasonable alternatives addressing how BLM will manage certain lands with wilderness characteristics for naturalness, solitude, and outstanding opportunities for primitive and unconfined recreation, where practical.

1.2.2 Alternatives Considered in Detail

The Eastern Interior Proposed Resource Management Plan and Final Environmental Impact Statement analyzed five alternatives, including the No Action Alternative. The following sections describe the alternatives as they apply to the Steese Planning Area.

1.2.2.1 Alternative A (No Action Alternative)

Alternative A continues present management practices and present levels of resource use based on the existing Steese RMP (BLM 1986), the Birch Creek River Management Plan (BLM 1983), and other management decision documents. Other management decision documents include special rules published in the *Federal Register* (for off-highway vehicle and recreational use) and public land orders (PLOs), including Alaska Native Claims Settlement Act (ANCSA) 17(d)(1) withdrawals.

Mineral leasing and new mining claims are precluded by public land orders (PLOs) issued under Section 17(d)(1) of ANCSA and withdrawals under the Alaska National Interest Lands Conservation Act (ANILCA) and the Wild and Scenic Rivers Act. Land disposal actions cannot occur due to current segregations for selection and the lack of decisions identifying lands for disposal in the existing land use plan. Four transportation corridors are designated in the Steese National Conservation Area. The existing Steese Special Recreation Management Area (SRMA) which includes only the Steese National Conservation Area will continue under current management with recreation settings of Primitive, Semi-Primitive Motorized, Research Natural Area, and Wild and Scenic River.

Two Research Natural Areas, Mount Prindle and Big Windy Hot Springs, will remain in place. No new special designations, such as Areas of Critical Environmental Concern (ACECs) are considered. There will be no suitability determinations made for wild and scenic rivers. There will be no decisions made to manage certain lands to maintain wilderness characteristics, although existing management would preserve these characteristics in many areas.

The current off-highway vehicle (OHV) designations will remain in place. Most of the planning area is under a Limited designation, including seasonal restrictions on summer motorized use in some areas. Research Natural Areas are closed to motorized travel.

Direction contained in existing laws, regulation, and policy will continue to be implemented, sometimes superseding provisions in the existing land use plans. The current levels, methods, and mix of multiple-use management of public land in the planning area will continue, and resource values will receive attention at present levels. In general, most activities will be analyzed on a case-by-case basis when applications are received. Few uses, other than new mining claims and mineral leasing, are limited or excluded as long as they are consistent with state and federal laws, and existing land use plans.

The existing plan does not identify a set of standard operating procedures or fluid mineral leasing stipulations. These are developed on a case-by-case basis as applications for permits are received.

1.2.2.2 Alternative B

Alternative B recommends approximately 97 percent of the planning area remain closed to mineral leasing and mineral entry, including the Steese National Conservation Area and Birch Creek Wild and Scenic river corridor. The plan recommends opening the remaining three percent to new mining claims and mineral leasing through partial revocation of PLOs. The Steese ACEC is recommended closed to new mineral entry and location, and mineral leasing. Unlike Alternative A, this alternative identifies lands suitable for acquisition, disposal, or retention. Wild and scenic rivers and Areas of Critical Environmental Concern are identified as right-of-way avoidance areas. Two transportation corridors are retained from Alternative A.

The boundary and management of the Steese Special Recreation Management Area (SRMA) are adjusted from Alternative A. Unlike Alternative A, Birch Creek and adjacent lands outside of the Steese National Conservation Area are included in the SRMA. Terminology is updated to match current policy. Recreation setting prescriptions are assigned to the SRMA. These settings include Primitive, Semi-Primitive, Backcountry, Middlecountry, and Frontcountry settings as defined in Tables 8, 9, and 10. There are more acres assigned to the Primitive, Semi-Primitive, and Backcountry settings under Alternative B than under Alternatives A, C, D, or E. These three settings are similar in management to the Primitive setting under Alternative A.

Most of the planning area is designated as Limited OHV use. Research Natural Areas are closed to motorized travel. Limitations on summer use apply to a much larger area than in Alternative A.

Two Research Natural Areas, Mount Prindle and Big Windy Hot Springs, will remain in place. Alternative B designates a new Steese ACEC, and identifies specific measures proposed to protect or enhance wildlife values within these areas. The Steese ACEC protects caribou range and Dall sheep habitat. One eligible river segment, Big Windy Creek (14 miles) is recommended suitable for designation under the Wild and Scenic Rivers Act. Lands possessing wilderness characteristics are identified and 95 percent these lands are managed to emphasize other resource values and multiple uses while applying management restrictions to reduce impacts to wilderness characteristics.

Standard Operating Procedures and Fluid Mineral Leasing Stipulations outlined in Appendix A.2 of the Proposed RMP/Final EIS apply.

1.2.2.3 Alternative C

Alternative C recommends 78 percent of the planning area remain closed to mineral leasing and mineral entry and location, including 81 percent of the Steese National Conservation Area and Birch Creek Wild and Scenic River corridor. The Steese ACEC is recommended closed to new mineral entry and location, and mineral leasing. Partial revocation of PLOs is recommended to open 22 percent of the planning area to mineral location and mineral leasing. Same as Alternative B, lands are identified as suitable for acquisition, disposal or retention and two transportation corridors are retained from Alternative A. There are no right-of-way avoidance areas.

As in Alternative B, the Steese National Conservation Area and Birch Creek are identified as a SRMA. Setting prescriptions for SRMAs include much fewer acres in a Primitive setting and more acres in Semi-Primitive, Backcountry, Middlecountry, and Frontcountry setting prescriptions than in Alternative B. There is a greater emphasis on developed recreational facilities compared to Alternative B.

As in Alternative B, most of the planning area is designated as Limited OHV use and Research Natural Areas are closed to motorized travel. Some areas are limited to designated trails. Restrictions on summer motorized use are more extensive than under Alternatives A or D, but less than under Alternative B.

As in Alternative B, Mount Prindle and Big Windy Hot Springs research natural areas are retained. A new Steese ACEC is designated for caribou and Dall sheep, but is smaller than in Alternative B. No rivers are recommended as suitable for designation under the Wild and Scenic Rivers Act. Compared to Alternative B, fewer acres (51 percent) are managed to emphasize other resource values and multiple uses while applying management restrictions to reduce impacts to

wilderness characteristics. The remaining 49 percent are managed to emphasize other resource values and multiple uses as a priority over protecting wilderness characteristics.

As in Alternative B, Standard Operating Procedures and Fluid Mineral Leasing Stipulations outlined in Appendix A.2 of the Proposed RMP/Final EIS apply.

1.2.2.4 Alternative D

Alternative D recommends 46 percent of the planning area remain closed to mineral leasing and mineral entry and location. Partial revocation of PLOs is recommended to open 54 percent to mineral leasing and mineral location. Approximately 54 percent of the Steese National Conservation Area remains closed to new mining claims. The Steese ACEC will remain closed to mineral entry and location. None of the existing transportation corridors are retained and no new transportation corridors are designated. As with Alternative C, there are no right-of-way avoidance areas.

Setting prescriptions for the Steese SRMA includes fewer acres in Semi-Primitive and Backcountry settings and more acres in Middlecountry settings than Alternatives B, C, and E. Frontcountry settings are the same as Alternatives C and E. There is a greater emphasis on developed recreational facilities than under Alternatives A, B, C, and E.

As in Alternatives B and C, most of the planning area is designated as Limited OHV use and Research Natural Areas are closed to motorized travel. Generally, travel and trail restrictions are less than Alternatives B and C, but more than Alternative A. Some areas are limited to no summer motorized use.

As in Alternatives B and C, existing RNAs are maintained. A new Steese ACEC is designated for caribou and Dall sheep, but is smaller than in Alternatives B and C. No rivers are recommended as suitable for designation under the Wild and Scenic Rivers Act. Only 38 percent of the acres possessing wilderness characteristics are managed to emphasize other resource values and multiple uses while applying management restrictions to reduce impacts to wilderness characteristics. The remaining 62 percent are managed to emphasize other resource values and multiple uses as a priority over protecting wilderness characteristics.

As in Alternatives B and C, Standard Operating Procedures and Fluid Mineral Leasing Stipulations outlined in Appendix A.2 of the Proposed RMP/Final EIS apply.

1.2.2.5 Alternative E (Proposed Resource Management Plan)

Alternative E represents the mix and variety of actions that the BLM believes best resolves the issues and management concerns in consideration of all values and programs, and is the BLM's Proposed RMP and Preferred Alternative. Alternative E is a minor variation of the alternatives analyzed in the Draft RMP/EIS and is qualitatively within the spectrum of alternatives analyzed therein.

Alternative E recommends 98 percent of the planning area remain closed to both mineral leasing and mineral location (staking of mining claims). Partial revocation of PLOs is recommended to open two percent of the planning area to mineral location and mineral leasing, similar to Alternative B. The Steese National Conservation Area and Birch Creek corridor remain closed to both mineral entry and mineral leasing. Outside of the National Conservation Area, riparian conservation areas, restoration watersheds, and the Steese Special Recreation Management Area are recommended closed to mineral entry and mineral leasing to protect fish and aquatic

resources, water quality, recreation settings. As in Alternatives B, C, and D scattered parcels of unmanageable lands are available for disposal. As in Alternative D, none of the existing transportation corridors designated under Alternative A are retained and no new corridors are designated.

The Steese SRMA is designated. Recreation setting is similar to Alternative C except some areas identified as Middlecountry in Alternative C change to Backcountry and Semi-Primitive in Alternative E. Same as Alternatives C and D, there would be no right-of-way avoidance areas.

As with Alternatives B, C and D, the two existing RNAs are maintained. Management within RNAs would be the same as Alternatives C and D, except the OHV area designation changes from Closed to Limited allowing for winter use of snowmobiles.

Unlike Alternatives B, C and D, no new ACECs are designated. Crucial caribou and Dall sheep habitat is identified in the Steese National Conservation Area. Management of these crucial habitat areas protects caribou range and Dall sheep habitat.

Approximately 80 percent of the planning area is managed to emphasize other resource values and multiple uses while applying management restrictions to reduce impacts to wilderness characteristics. These areas include crucial caribou and Dall sheep habitat, Research Natural Areas, riparian conservation areas, and Primitive, Semi-Primitive, and Backcountry recreation management zones. The remaining 20 percent is managed to emphasize other resource values and multiple uses as a priority over protecting wilderness characteristics.

A Limited OHV area designation is put into place on all lands, including Research Natural Areas. More detailed travel decisions for the Steese Planning Area are deferred to a travel management plan to be completed within five years of this record of decision. Interim travel management is the same as Alternative A with minor changes including: allowing snowmobile use in Research Natural Areas and removing prohibitions on the use of hovercraft and airboats.

1.2.3 Environmentally Preferred Alternative

The Council on Environmental Quality has defined the environmentally preferable alternative as the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act. This section lists six broad policy goals for all federal plans, program, and policies:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our National heritage, and maintain, whenever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities.

- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on these criteria, identification of the most environmentally preferable alternative involves a balancing of current and potential resource uses with that of resource protection. Alternative E best fulfills that balance; therefore, the BLM finds Alternative E best meets the definition of the environmentally preferred alternative.

1.3 Results of Protest Review and Governor's Consistency Review

1.3.1 Protests

The BLM provided a 30-day protest period for the Proposed RMP/Final EIS in accordance with 43 CFR 1610.5-2. The BLM Director received nine protest letters. All nine protesters were determined to have standing to protest, and all nine protests were considered by the Director. The protest issues included disposition of mineral withdrawals, areas of critical environmental concern, wilderness characteristics, and planning and National Environmental Policy Act (NEPA) process concerns. Process issues raised in various protests included public comment periods, range of alternatives, notice for ACECs, and consultation with Native corporations.

Several protests took issue with the BLM recommendations to retain ANCSA 17(d)(1) withdrawals pending new withdrawals under the authority of the Federal Land Policy and Management Act (FLPMA), stating that it may violate the Alaska Land Transfer Acceleration Act, and that it was inconsistent with ANILCA and the Wild and Scenic Rivers Act. The State claimed that retention of ANCSA withdrawals frustrates the State's ability to fulfill their entitlement under the Alaska Statehood Act, by keeping lands closed to State selection. Additionally, some protesters claimed that the ANCSA withdrawals impede access to lands and resources, inconsistent with provisions of ANILCA that seek to ensure balance between resource protection and economic development. Some protesters recommended instead that the BLM revoke all ANCSA withdrawals in the planning area and not recommend any new FLPMA withdrawals.

Regarding ACECs, some protests maintained that the proposed ACECs do not meet the relevance and importance criteria or need special management, and thus do not qualify as ACECs and should not be designated as such.

One protest claimed that the Proposed RMP violates BLM policy regarding consideration of lands with wilderness characteristics. This protest resulted in a clarification discussed in section 1.4.1.

Following a review of the protests the BLM Director denied each protest, although minor corrections and clarifications were made and have been explained in section 1.4.1 Notice of Modifications and Clarifications.

A Protest Report addresses each protest in detail, and is available online at: https://www.blm.gov/programs/planning-and-nepa/public-participation/protest-resolution-reports

1.3.2 Governor's Consistency Review

Concurrent with the protest period, the BLM made the Proposed RMP/Final EIS available to the Governor of Alaska for a 60-day consistency review as required by 43 CFR 1610.3-2(e). The

BLM's planning regulations require that RMPs be "consistent with officially approved or adopted resource-related plans, and the policies and procedures contained therein, of other Federal agencies, State and local governments, and Indian tribes, so long as the guidance and resource management plans also are consistent with the purposes, policies, and programs of Federal laws and regulations applicable to public lands" (43 CFR 1610.3-2(a)).

The general requirement in FLPMA and the BLM planning regulations is to coordinate the resource management planning process with plans of other agencies, States, and local governments to the extent consistent with law (see FLPMA Section 202(c)(9) and 43 CFR 1610.3-1(a)) and the respective duties to be consistent with both officially approved or adopted plans (to the extent those plans are consistent with Federal law or to the maximum extent practical; see 43 CFR 1610.3-2(a)(b)). In accordance with FLPMA, the BLM was aware of and gave consideration to State, local, and tribal land use plans and provided meaningful public involvement throughout the development of the Eastern Interior RMP/EIS.

The BLM is aware that there are specific State laws and local plans relevant to aspects of public land management that are separate and independent of Federal law. However, the BLM is bound by Federal law; as a consequence, there may be inconsistencies that cannot be reconciled. The FLPMA and its implementing regulations require that the BLM's RMPs be consistent with officially approved State and local plans only if those plans are consistent with the purposes, policies, and programs of Federal laws and regulations applicable to public lands.

Where officially approved State and local plans or policies and programs conflict with the purposes, policies, and programs of Federal laws and regulations applicable to public lands, there will be an inconsistency that cannot be resolved. With respect to officially approved State and local government policies and programs (as opposed to plans), this consistency provision applies only to the maximum extent practical.

The 60-day Governor's consistency review period ended on September 28, 2016. The Alaska Department of Resources responded on behalf of the Governor on September 28, 2016 with four key issues. On October 12, 2016, the BLM Alaska State Director notified the Governor that he had determined that only one of these points was within the scope of the Governor's Consistency Review Process which is narrow in scope and intended to address only those situations where the Proposed RMP may be inconsistent with officially approved or adopted State or local land use plans, policies, or programs.

The consistency issue raised by Alaska Department of Natural Resources is that the Proposed RMP is inconsistent with State land use plans, programs, and policies, largely because the Proposed RMP purportedly "preempts" mineral exploration and development throughout much of the Eastern Interior Planning Area. The State asserts this is in contrast to approved State plans for lands within and near the planning area, which reflect the State's goals to: "Make metallic and non-metallic resources available to contribute to the energy and mineral supplies and economy of Alaska"; and "Contribute to Alaska's economy by making subsurface resources available for development" (ADNR letter at pp. 4-7).

The BLM Alaska State Director believes the Proposed RMP is consistent with the State's land use plans, policies, and programs reflected therein, including the State's policy to make mineral resources available for development because:

1. The Proposed RMP, if implemented, will not preclude development on State lands or access across BLM-managed lands to State lands within the planning area. As described in #4 below, the Proposed RMP still allows for a wide variety of multiple-uses.
2. The Proposed RMP recommends revoking ANCSA l 7(d)(l) withdrawals on 1.7 million acres to open these lands to mineral location, entry, and leasing. This includes 1.1 million acres or almost two-thirds of the Fortymile Subunit, most of which is within the Fortymile Mining District. Other areas recommended to be opened include 4,000 acres in the White Mountains Subunit near the Tower Hills prospect; 547,000 acres in the Upper Black River Subunit adjacent to State and State-selected land; and 30,000 acres in the Steese Subunit adjacent to State land.
3. As noted in ADNR's letter, the State's Upper Yukon Area Plan identifies approximately 194,000 acres in the Middle Fork region as habitat lands recognizing use by caribou for calving. Likewise, the Proposed RMP designates the Fortymile ACEC for caribou calving and Dall sheep and identifies a management prescription for the ACEC and additional caribou calving/post-calving areas outside of the ACEC. This is consistent with the State's program/policy of identifying areas for habitat use in State land use plans. By identifying management prescriptions for crucial caribou and Dall sheep in the Proposed RMP, the BLM is following a similar process.
4. Similar to the State's land use plans, the Proposed RMP allows for a wide variety of multiple-uses throughout the planning area, including: permits, leases, rights-of-way, mineral materials sales, commercial recreation permits, personal and commercial use of timber and forest products, casual recreational use, off-highway vehicle use, mining on existing federal claims, and once implemented, mineral leasing and staking of new mining claims on approximately 1.7 million acres.

The BLM State Director did not make any changes to the Proposed RMP in response to the Governor’s Consistency Review Process. The Governor was then given 30-days to appeal the BLM State Director’s decisions to the BLM Director. On November 8, 2016, the BLM Director received an appeal letter from the Governor in accordance with 43 CFR 1610.3-2(e). In his December 14, 2016 response, the Director found the recommendations provided in the State’s appeal letter do not meet the standard for granting an appeal in accordance with 43 CFR 1610.3-2(e). The BLM Director’s full response to this appeal will also be published in the *Federal Register* after this ROD is issued.

1.4 Decision

The BLM hereby approves the attached Resource Management Plan (RMP) for the Steese Planning Area of the Eastern Interior Planning Area (hereafter referred to as the Steese Approved RMP). This Approved RMP replaces the 1986 Steese RMP and amendments.

The BLM prepared the Approved RMP under the regulations (43 CFR 1600) implementing the Federal Land Policy and Management Act (FLPMA) of 1976 (43 United States Code [U.S.C.] §§ 1701, et seq.). The Eastern Interior Final Environmental Impact Statement was prepared for this resource management plan in accordance with the National Environmental Policy Act of 1969.

1.4.1 Notice of Modifications and Clarifications

The BLM carried forward the text of the Proposed RMP (Alternative E) to incorporate into the Approved RMP and Record of Decision. During preparation of the Approved RMP, the BLM

made minor modifications, clarifications, and corrections to the Proposed RMP based on review and resolution of protest letters as well as from internal review by the BLM. Modifications and clarifications to the decisions are provided below. Specific management decisions for BLM-administered land within the Steese Planning Area are presented in Chapter 2, Steese Approved RMP.

1.4.1.1 Modifications

During the course of reviewing protests and further internal review, the BLM made the following modifications to the Proposed Plan:

Monitoring requirements for Birch Creek WSR are added in section 2.2.13 “Water Resources, Wetlands, and Floodplains”.

1.4.1.2 Clarifications and Corrections

The following clarifications and minor corrections made to the information included in the Proposed RMP/Final EIS are reflected in the attached Approved RMP:

The goal for Research Natural Areas was inadvertently left out of the Proposed RMP. A goal consistent with the goal from the No Action Alternative is added to section 2.2.24.

Tables H.55, H.56, H.57, and H.59 of Appendix H of the Eastern Interior Proposed RMP/Final EIS have the incorrect recreation setting character listed in the tables. Maps and text in Chapter 2 of the Proposed RMP/Final EIS are correct. Corrected tables can be found in Section 2.2.20 of this document. These are implementation level decisions which will undergo additional NEPA analysis during development of the recreation management plan.

The Alaska Interagency Wildland Fire Management Plan was updated in 2016 and fire management options were clarified. Table 5 “Fire Management Options for the Planning Area” is updated to reflect these revisions.

The USGS recently updated the watershed boundary dataset. As a result, the hydrologic unit codes changed for some of the 6th level watersheds. Map 2, Section 2.2.5, and tables B-2, B-3, and B-4 of the Approved RMP were updated to reflect the new hydrologic unit codes.

Rationale language in section 2.6.2.11 Wilderness Characteristics of the Proposed RMP/Final EIS incorrectly stated that the BLM would not consider impacts to wilderness characteristics during future site specific NEPA analysis. This language was corrected in response to a protest from The Wilderness Society. The BLM will comply with all requirements of NEPA and disclose impacts to lands with wilderness characteristics in site specific NEPA analysis. Corrected language can be found in section 2.2.14 of this Approved RMP.

1.4.2 What the Decision and Approved Resource Management Plan Provide

This Record of Decision and Approved RMP provide overall direction for management of all resources found on BLM-managed lands in the Steese Planning Area.

Decisions in the this document apply to all BLM-managed lands including State- and Native-selected lands, until such time title is transferred to the State or a Native corporation. Decisions also apply to BLM-managed subsurface mineral estate beneath private lands. Acreages presented

in this document are approximate because the BLM continues to transfer title of lands within the planning area.

This Record of Decision serves as the final decision establishing the land use plan decisions outlined in the Approved RMP and is effective on the date it is signed. No further administrative remedies are available for these land use plan decisions.

1.4.3 What the Decision and Approved Resource Management Plan Do Not Provide

This Record of Decision and Approved RMP do not contain decisions for management of lands administered by the State of Alaska, the National Park Service, the Fish and Wildlife Service, or the military.

The Record of Decision and Approved RMP do not authorize any project, approve any application, or provide approval for any specific future action within the planning area. All future applications will be subject to an environmental analysis process, which will include opportunity for public review, identification of potential impacts resulting from the proposed action, development and application of mitigating measures (section 2.2.2), and assignment of the Standard Operating Procedures in Appendix A as appropriate.

More detailed travel decisions are being deferred until supplemental rules are promulgated and a travel management plan is developed per sections 1.2.2.5 and 2.2.20.

In addition, many decisions are not appropriate at this level of planning and are not included in the Record of Decision and Approved RMP. Examples of these types of decisions include:

Statutory Requirements: The decisions will not change the BLM's responsibility to comply with applicable laws and regulations including, but not limited to, the Clean Air Act, Clean Water Act, National Environmental Policy Act, Federal Land Policy and Management Act, the Endangered Species Act, the Alaska National Interest Lands Conservation Act, or any other federal law.

National Policy: The decisions will not change the BLM's obligation to conform to current or future national policy.

Funding Levels and Budget Allocations: These are determined annually at the national level and are outside the scope of the resource management plan.

1.4.4 Implementation Decisions

While preparing the Eastern Interior RMP/EIS, the BLM considered various implementation actions that would either be approved either at the same time as the ROD or implemented through an additional decision-making process after the ROD. The following decisions are implementation decisions and are appealable under 43 CFR Part 4.

Changing OHV weight limits from gross vehicle weight rating to curb weight, allowing for use of hovercraft and airboats, and limitations on placement of traps, bait, and wildlife lures. See sections 2.2.16, 2.2.20, and 2.2.21 of the Approved RMP.

1.4.4.1 Appeal Process for Implementation Decisions

Any party adversely affected by an implementation decision may appeal to the Interior Board of Land Appeals within 30 days of receipt of this decision in accordance with the provisions of 43 CFR Part 4.. The publication of the Notice of Availability of the ROD/Approved RMP in the *Federal Register* will be considered the date the decision is received for any party not served with the decision. The appeal should state the specific implementation decision that is being appealed. The appeal must be filed with the Field Manager, at the following address:

Bureau of Land Management
Eastern Interior Field Office
222 University Avenue
Fairbanks, Alaska 99709

You may include a statement of reasons when the notice of appeal is filed, or you may file the statement of reasons within 30 days after filing the appeal. A copy of the appeal, statement of reasons, and all other supporting documents must also be sent to the Office of the Regional Solicitor, Alaska Region at the following address:

Office of the Regional Solicitor
U.S. Department of the Interior
4230 University Drive, Suite 300
Anchorage, Alaska 99508

If the statement of reasons is filed separately, it must be sent to the Interior Board of Land Appeals, Office of Hearings and Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia, 22203. It is suggested that any appeal be sent certified mail, return receipt requested.

1.4.4.2 Request for Stay

If you wish to request a stay of the decision pending the outcome of the appeal, the motion for stay must be filed in the office of the Authorized Officer (Eastern Interior Field Office) at the time the appeal is filed and must show sufficient justification based on the following standards under 43 CFR 4.21:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellant’s success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

1.5 Management Considerations in Selecting the Approved Resource Management Plan

The decision to select the Proposed RMP (Alternative E) as the Approved RMP is based on the conclusion that it best meets the purpose and need and would have more favorable outcomes for various resources and programs and relatively low adverse environmental impacts in comparison to the other alternatives.

The purpose of the Proposed RMP is to provide a comprehensive framework to guide management of public lands and interests within the planning area. The objectives, land use allocations, and management decisions in the Proposed RMP are based on multiple use and

sustained yield, except where a tract of such public land has been dedicated to specific uses according to any other provisions of law; it will be managed in accordance with such law, in accordance with Section 103 of FLPMA. There are specific considerations within the planning area that lead the BLM to focus management on conservation as well as multiple use and sustained yield:

The Steese National Conservation Area was established by ANILCA §401 and special values identified in ANILCA §401(b) identifies Birch Creek and caribou range as special values to be considered in planning and management of the National Conservation Area.

The Steese National Conservation Area is a component of the BLM's National Landscape Conservation System (NLCS). The mission of the NLCS is to conserve, protect and restore nationally significant landscapes recognized for their outstanding cultural, ecological and scientific values.

Special values in the Steese National Conservation Area include Birch Creek Wild and Scenic River, caribou calving grounds and home range, and Dall sheep habitat. While various land uses are allowed in the National Conservation Area, the area is managed so that it's scenic, scientific, cultural, and other resources are protected.

Birch Creek Wild and Scenic River was designated by ANILCA §603. Management objectives for Birch Creek include: protecting valid existing rights and future rights granted pursuant to appropriate Federal and State laws; preserving the river and its immediate environment in a natural, primitive condition; preserving its free-flowing condition; protecting water quality; providing a high quality primitive recreational opportunity; providing opportunities for interpretive, scientific, educational, and wildlands oriented uses; assuring protection of historic and ecological values; and maintaining and improving fish and wildlife habitats (BLM 1983).

ANILCA Title VIII establishes a priority for the "customary and traditional uses" of these subsistence resources by all rural residents of Alaska on federal public lands. The law provides the opportunity for rural residents to continue to engage in a subsistence way of life. State of Alaska law recognizes a subsistence preference for all residents of Alaska (Alaska Statute 16, Title 16 and Alaska Administrative Code, Title 5).

The BLM is tasked with the job of multiple use management, as mandated under FLPMA and numerous other laws and regulations that govern the management of public lands for various purposes and values. The Proposed RMP (Alternative E) was developed to address the diverse resource uses in a fair manner and provide a practical and "workable" framework for management of the lands within the planning area.

The BLM is responsible for preparing a plan consistent with its legal mandates that reflects its collective professional judgment, while incorporating varying viewpoints and ideas. Due to the diversity of community needs and stakeholders affected by management of BLM lands, there has been both support and opposition to certain components of the Proposed RMP. BLM's objective in choosing Alternative E as the preferred alternative and proposed plan was to address these diverse needs and concerns in a fair manner and provide a practical and workable framework for management of BLM public lands.

The Approved RMP provides a balance between those reasonable measures necessary to protect the existing resource values and the continued public need for use of the BLM public lands within the planning area. Approval of a plan which provided a balance of resource uses and the

flexibility of management options to meet the concerns for the resources and the socioeconomic need was a major factor. Alternative E was selected because it provides management direction that will maintain and improve the quality of the resources, while considering needs and demands for potential resource development and use. In the end, resource use is managed by integrating ecological, economic, and social principles in a manner that safeguards the long-term sustainability, diversity, and productivity of the land.

1.5.1 ANILCA Section 810

Section 810(a) of ANILCA requires that a subsistence evaluation be completed on the RMP. ANILCA also requires that this 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 reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

The following discussion summarizes the ANILCA §810 evaluation for the decision in this ROD. The summary is based on the detailed ANILCA §810 analysis in Appendix J of the Eastern Interior Proposed RMP/Final EIS for Alternative E. The analysis and conclusions presented in the detailed ANILCA §810 evaluation in the Proposed RMP/Final EIS also apply to the decision in this ROD, because the decision is substantially the same as the Proposed RMP (Alternative E) in the Proposed RMP/Final EIS. The modifications and clarifications discussed in Section 1.4.1 “Notice of Modifications and Clarifications” do not change the potential impacts on subsistence resources. As a result, the impacts of the decision in this ROD on subsistence resources will be no more than those analyzed for Alternative E in the Eastern Interior Proposed RMP/Final EIS.

1.5.1.1 Findings

The Steese Approved RMP when considered together with all past, present, and reasonably foreseeable future cumulative effects discussed in the RMP/EIS, will not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses will be minor, and any impacts from the development allowed to occur will be minimized by the leasing stipulations and standard operating procedures (SOPs) discussed in Appendix A, “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”. Impacts to subsistence resources will be expected to be localized and temporary, and will not be expected to impact resources at the population level. SOPs and leasing stipulations to protect riparian and aquatic habitats will be necessary to mitigate impacts from placer mining. No impacts to access by subsistence users will be expected to occur. Availability and distribution of subsistence resources, particularly for caribou and moose, may change if hunting pressure increases due to continued cross-country access in the Steese National Conservation Area or from new access around Circle. Conflicts due to competition are largely issues outside the scope of the Steese Approved RMP. Efforts to reduce these conflicts will be accomplished through limits within regulations on hunting seasons, bag limits, and methods and means, which are the responsibility of the Federal Subsistence Board and Alaska Board of Game.

1.5.1.2 Notice and Hearings

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the federal agency gives the required notice and holds a hearing in

accordance with ANILCA Sec. 810(a)(1) and (2) and makes the three determinations required by §810(a)(3)(A), (B), and (C). The BLM found through its subsistence evaluation on the Eastern Interior Proposed RMP/Final EIS that Alternative D in the Steese Subunit when considered together with all past present, and reasonably foreseeable future cumulative effects discussed in the RMP/EIS, may significantly restrict subsistence uses. Therefore, the BLM undertook the notice and hearing procedures required by the ANILCA Sec. 810 (a)(1) and (2) in conjunction with release of the Eastern Interior Draft RMP/EIS in order to solicit public comment from the potentially affected communities and subsistence users.

1.5.1.3 Final Determinations under ANILCA Section 810

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

The Steese Proposed RMP (Alternative E) was found through the ANILCA Sec. 810(a) process to have no significant restriction on subsistence uses including with the cumulative case. Therefore the determination process as described in ANILCA Sec. 810(a)(3)(A), (B), and (C) is not required.

1.5.2 Wild and Scenic Rivers

The Proposed RMP/Final EIS describes the process by which the BLM considered wild and scenic river eligibility and suitability. The plan considered Big Windy Creek to be eligible for designation, but this ROD does not determine it to be suitable for designation, instead this river will be protected by other means.

Big Windy Creek possesses outstandingly remarkable scenic, geologic and wildlife values. The varied geologic/hydrologic features and the unique contrasting vegetation resulting from the hot springs provide outstandingly remarkable scenery. The hot springs also provide unique habitat for wildlife. Big Windy Creek is entirely within BLM's management and is located within the Steese National Conservation Area. The Approved RMP includes decisions that will protect Big Windy Creek and the surrounding lands. The Steese National Conservation Area is withdrawn from mineral entry and closed to mineral leasing.

1.6 Mitigation Measures

The Steese Approved RMP adopts all practicable means to avoid or minimize environmental harm as described in section 0, Appendix A, and Appendix B. The BLM will develop additional measures to mitigate environmental impacts through subsequent environmental analysis during the permitting process, and will monitor and enforce mitigation requirements to assess and ensure their effectiveness. This will also occur during development of implementation plans such as the Steese travel management plan and recreation area management plan. Additional environmental analysis, the subsequent identification of impacts, and the development of mitigating measures

specific to the resources involved are part of the BLM's process for developing implementation plans for these areas.

1.7 Plan Monitoring and Evaluation

The BLM planning regulations (43 CFR Part 1610.4-9) call for the monitoring of resource management plans on a continual basis with a formal evaluation done at periodic intervals. Implementation of the Approved RMP will be monitored over time and plan evaluations conducted periodically. Management actions arising from activity plan decisions will be evaluated to ensure consistency with the resource management plan objectives. Monitoring and the evaluation process are described in more detail in the section 2.1.8 "Plan Evaluation and Adaptive Management" of the Approved RMP.

1.8 Public Involvement, Consultation, and Coordination

One of the BLM's objectives during development of the Eastern Interior, Steese Resource Management Plan was to understand the views of various members of the public, agencies, organizations, Native corporations, tribes, and state and local governments by providing opportunities for participation in the resource management planning process. The BLM used newsletters, media releases, and website postings to offer up-to-date information to interested parties. The BLM will continue to actively seek the views of the public, using techniques such as media releases, websites, and mailings to request participation and inform the public of project proposals and implementation planning.

The BLM will continue to coordinate both formally and informally, with numerous state, federal, tribal, and local agencies and officials interested and involved in management of BLM lands in Interior Alaska. The State of Alaska, Village of Chalkyitsik, and Gwichyaa Zhee Gwich'in tribal government were cooperating agencies for the Eastern Interior Resource Management Plan. The Eastern Interior Field Office will continue to consult with federally recognized tribes and Alaska Native corporations during implementation of the Approved RMP. The Field Office will continue to work with the State of Alaska on various projects and under existing and future memorandums of understanding.

The BLM consulted with the U.S. Fish and Wildlife Service in 2008 to determine if the resource management plan would affect any federally listed threatened or endangered species. The Fish and Wildlife Service determined that there were no listed species in the planning area, thus the resource management plan would have no effect on listed species. If in the future, listed species occur in the planning area, the BLM will consult with the Fish and Wildlife Service prior to approval of any project that may affect any federally listed species or its habitat.

More in-depth information on these efforts is included in Chapter 5, Consultation and Coordination in both the Eastern Interior Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) and Proposed RMP/Final EIS.

1.9 Availability of the Approved RMP

Copies of the Record of Decision and Approved RMP are available on request from the following locations: BLM Fairbanks District Office, 222 University Avenue, Fairbanks, Alaska 99709, (907) 474-2200 or (800) 437-7021, and on the Eastern Interior RMP website at: https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/eastern-interior-rmp

1.10 Approvals and Signature Page

FIELD MANAGER RECOMMENDATION
Having considered a range of reasonable alternatives, associated effects, and public input, I recommend adoption and implementation of the attached Steese Approved Resource Management Plan.

Acting Eastern Interior Field Manager — DEC 3 0 2016 Date

DISTRICT MANAGER CONCURRENCE
I concur with the adoption and implementation of the Steese Approved Resource Management Plan.

Geoff Beyersdorf
Fairbanks District Manager — DEC 3 0 2016 Date

STATE DIRECTOR APPROVAL
In consideration of the foregoing, my decision it to adopt the Steese Approved Resource Management Plan.

Bud C. Cribley
Alaska State Director — DEC 3 0 2016 Date

2. Steese Approved Resource Management Plan

2.1 Introduction

This Approved RMP replaces the Steese RMP and Record of Decision approved in 1986. The Approved RMP adopts management described in Common to all Subunits, decisions described in Alternative E, stipulations and standard operating procedures described in Appendix A.4, and tables applicable to Alternative E described in Appendix H, as presented in the Eastern Interior Proposed RMP/Final Environmental Impact Statement (EIS), with modifications described in section 1.4.1.1 of the Record of Decision. Decisions in this Approved RMP apply to the Steese Planning Area.

The BLM initiated development of this Approved RMP with publication of a Notice of Intent to prepare a resource management plan and associated EIS in the *Federal Register* on February 29, 2008 (73 FR 11140). Over the next 8 years, the BLM conducted public outreach, and involved diverse interests as part of plan development.

The Environmental Protection Agency's (EPA) March 2, 2012 publication of the Notice of Availability for the Eastern Interior Draft RMP/EIS in the *Federal Register* initiated the public comment period (77 FR 12835). The BLM also published Hardrock Mineral Leasing in the White Mountains National Recreation Area, Supplement to the Eastern Interior Draft RMP/EIS (Supplement) during the Draft RMP/EIS public comment period. The EPA's Notice of Availability published in the *Federal Register* on January 11, 2013 initiated the public comment period on the Supplement (78 FR 2397). The public comment periods on both the Draft RMP/EIS and Supplement ended on April 11, 2013.

The EPA published the Notice of Availability for the Eastern Interior Proposed RMP/Final EIS in the *Federal Register* on July 29, 2016 (81 FR 49981), initiating the 30-day protest period (43 CFR 1610.5-2). The protest period ended on August 29, 2016, and the BLM subsequently resolved each protest submitted. In doing so, the State Director's Proposed RMP was upheld in each instance. Concurrent with the protest period, the BLM made the Proposed RMP/Final EIS available to the Governor of Alaska for a 60-day consistency review until September 28 (43 CFR 1610.3-2(e)). During the 60-day period the Commissioner of the Alaska Department of Natural Resources submitted a letter to the State Director on behalf of the Governor, identifying potential inconsistencies of the Proposed RMP with the State's land use plans, programs and policies. However, the BLM determined that the Proposed RMP was consistent with the State's land use plans, programs and policies.

2.1.1 Purpose and Need

The purpose of the Eastern Interior Steese Resource Management Plan is to provide a comprehensive framework to guide management of public lands and interests within the Steese Planning Area. The Proposed Resource Management Plan incorporates new data, addresses land use issues and conflicts, and specifies where and under what circumstances particular activities will be allowed on BLM-managed public lands.

The Resource Management Plan is needed to update existing Steese Resource Management Plan (BLM 1986), to address current issues, and to meet the requirements of BLM's Land Use Planning Handbook (16021-1).

Evaluations of the Steese Resource Management Plan showed that the current plan is not responsive to issues in the planning area. Major programs that need updating to respond to current issues include fisheries, wildlife, travel management, recreation, withdrawals, and minerals. The evaluation also found that current plan does not reflect the entire suite of decisions to include in land use plans per BLM's Land Use Planning Handbook (H-1601-1). Decisions missing include air quality, non-native invasive plants, and wilderness characteristics.

In addition to responding to current issues, the Approved RMP makes the required decisions as outlined in BLM's Land Use Planning Handbook (H-1601-1).

2.1.2 Planning Area Description

Within the Steese Planning Area, the BLM administers approximately 1.3 million acres of BLM-managed land surface estate and approximately 7,000 acres of federal split-estate (Table 1). Decisions in the Approved RMP will initially apply to 1,274,000 acres of BLM-managed lands. Acreages are approximate and will change because the BLM continues to transfer title to lands within the planning area to the State of Alaska and Alaska Native corporations. The Approved RMP covers the land classifications described below:

BLM-managed Lands (unencumbered): These are lands that will be retained in long-term federal ownership. These lands are not selected by the State of Alaska or by Native corporations.

State-Selected Lands: These are public lands that are selected by the State of Alaska as part of the Alaska Statehood Act of 1958 and Alaska National Interest Lands Conservation Act (ANILCA) of 1980. Until conveyance, State-selected lands outside of National Park System lands or National Wildlife Refuges are managed by the BLM. ANILCA (section 906(f)) allows for over selection by the State up to 25 percent of the entitlement. Some State-selected lands will eventually be retained in long-term federal ownership. Until these lands are either conveyed to the State or the selections removed, the lands are segregated from mineral entry (closed to staking of new federal mining claims).

Native-Selected Lands: The Alaska Native Claims Settlement Act (ANCSA) of 1971 gave Alaska Natives an entitlement of 44 million acres to be selected from public lands defined and withdrawn by the Act. Some ANCSA corporations filed selections in excess of their entitlement and some of the Native-selected lands will be retained in federal ownership. Until these lands are either conveyed to the Native corporation or the selections removed, the lands are segregated from mineral entry (closed to staking of new federal mining claims).

Mineral Estate: All subsurface mineral estate lying beneath BLM lands is managed by the BLM. Conveyances made under the Alaska Native Claims Settlement Act and the Statehood Act include the mineral estate. Conveyances made under other land disposal laws, such as the Recreation and Public Purpose Act, do not include the mineral estate. Federal split-estate lands are those on which the surface of the land has been patented (that is, transferred to private ownership), while the mineral interests are retained by the United States. The rights of a surface owner generally do not include ownership of mineral resources such as oil, natural gas, or coal. Under the appropriate provisions and authorities of the Mineral Leasing Act of 1920, individuals and companies can prospect for and develop coal, petroleum, natural gas and other minerals reserved by the federal government. Within the planning area, the BLM manages an estimated 8,000 acres of subsurface mineral estate beneath private surface.

Decisions in the Approved RMP do not apply to State, village and regional Native corporation, National Park Service, U.S. Fish and Wildlife Service, and private lands. Decisions apply to BLM-managed subsurface estate, except for subsurface lands under National Park Service and U.S. Fish and Wildlife Service lands.

Table 1. Land classification within the Steese Planning Area

Land Status	Acres
BLM unencumbered	1,223,000
State-selected lands	35,000
ANCSA Native-selected lands	8,000
Total BLM surface estate	**1,267,000**
Split Estate (BLM subsurface)	7,000
BLM subsurface estate	**1,274,000**

2.1.3 Consideration of BLM Policies, Plans, and Programs

The following BLM plans and standards relate to management in the Steese Planning Area:

- BLM, Alaska Statewide Land Health Standards (USDI-BLM 2004)
- River Management Plan Birch Creek a Component of the National Wild and Scenic Rivers System. (USDI-BLM 1983)
- Designation of Off Road Vehicle Use Areas for the Steese National Conservation Area (53 FR 26891; 1988)
- Special Rules and Regulations for the Steese National Conservation Area et al. (53 FR 25696;1988)

In the event there are inconsistencies or discrepancies between previously approved plans and this Approved RMP, the decisions in this resource management plan will be followed. All future resource authorizations and actions will conform to, or be consistent with the decisions contained in the resource management plan. However, this plan does not repeal valid existing rights on BLM-managed lands. A valid existing right is a claim or authorization that takes precedence over the decisions developed in this plan. If such authorizations come up for review and can be modified, they will also be brought into conformance with the plan.

While the final environmental impact statement for this resource management plan constitutes compliance with National Environmental Policy Act requirements for the broad-scale decisions made in this resource management plan, the BLM will continue to prepare environmental assessments or environmental impact statements where appropriate as part of implementation-level planning and decision making.

Birch Creek Wild and Scenic River: Typically, outstandingly remarkable values for Wild and Scenic Rivers are identified in a study of the river and listed in the designating legislation. The Environmental Impact Statement for the Proposed Birch Creek National Wild River completed in 1975 (DOI 1975) discusses values of the river, but does not formally list the outstandingly remarkable values. In 1980, Section 603 of the Alaska National Interest Lands Act designated Birch Creek Wild and Scenic River without specifying these values. In cases like this, managers typically determine outstandingly remarkable values from study reports and other documentation

of management activities and intentions as well as incorporating current data and expertise. The Eastern Interior Field Manager used the wild and scenic rivers inventory conducted for the Eastern Interior planning process to identify outstandingly remarkable values for Birch Creek (Appendix E of this document and Appendix E of the Eastern Interior Proposed RMP/Final EIS).

Outstandingly Remarkable Values for Birch Creek are scenic, recreation, and fisheries. These are described in more detail in Appendix E of this document.

2.1.4 Related Plans

The BLM considered plans developed by federal, State, local and tribal governments that relate to management of lands and resources within and adjacent to the Eastern Interior planning area during development of the RMP/EIS. Table 2 provides a list of major regional plans that have been reviewed in preparation of this RMP/EIS. Some specific items of consideration are discussed in the following paragraphs.

The Yukon Charley Rivers Wilderness Suitability Review identifies lands that are suitable for wilderness designation. The Yukon Flats National Wildlife Refuge Comprehensive Conservation Plan identifies areas potentially suitable for wilderness. The BLM considered these adjacent lands when conducting the wilderness characteristics inventory for the Eastern Interior Planning Area.

Alaska Department of Natural Resources Upper Yukon Area Plan identifies management guidelines for Fortymile caribou calving areas in Region 1, Middle Fork and Dall sheep habitat in the Glacier Mountain area (M-03). Guidelines include avoiding or minimize conflicts with caribou calving and Dall sheep, limiting activities during caribou calving season, and protecting or mitigating impacts to mineral licks and access routes to the licks used by the wildlife. BLM considered these guidelines when developing management intent for the crucial caribou and Dall sheep habitat.

Table 2. List of related plans for the Steese Planning Area

Management Plan	Agency
Yukon Flats National Wildlife Refuge Comprehensive Conservation Plan, 1987	U.S. Fish and Wildlife Service
Arctic National Wildlife Refuge Comprehensive Conservation Plans	U.S. Fish and Wildlife Service
Eastern Tanana Area Plan, 2015	State of Alaska, Department of Natural Resources
Yukon Tanana Area Plan, 2014	State of Alaska, Department of Natural Resources
Upper Yukon Area Plan, 2003	State of Alaska, Department of Natural Resources
Resource Management Plan Yukon-Charley Rivers National Preserve, 1994	National Park Service
Yukon Charley Rivers General Management Plan, Land Protection Plan, Charley Wild River Management Plan, and Wilderness Suitability Review, 1985	National Park Service

2.1.5 Implementing the Plan

Plan implementation is a continuous and active process. The BLM will develop an implementation plan for the Approved RMP as required by BLM Instruction Memorandum (IM)

WO 2013-014 Revised Guidance for Establishing Implementation Priorities for Land Use Plans (11/20/2012). Decisions in this plan will be implemented over a period of years depending on budget and staff availability. Decisions presented in the *Management Decisions* section of this Approved RMP are of three types: Immediate, One-time, and Long-Term.

2.1.5.1 Immediate Decisions

These decisions are the land use planning decisions that go into effect when the ROD is signed. These include goals, objectives, allowable uses, and management direction, such as the allocation of lands as open or closed for salable mineral sales, designation of Special Recreation Management Areas, and OHV area designations. These decisions require no additional analysis and guide future land management actions and subsequent site-specific implementation decisions in the planning area. Proposals for future actions, such as mineral material sales, land adjustments, and other allocation-based actions, will be reviewed against these RMP decisions to determine if the proposal is in conformance with the plan.

2.1.5.2 One-Time Future Decisions and Implementation Plans

These are the types of decisions that are not implemented until additional decision-making and site-specific analysis is completed. Examples are implementation of the recommendations to withdraw lands from locatable mineral entry under FLPMA, recommended revocation of existing ANCSA 17(d)(1) withdrawals, or development of travel management plans. Future one-time decisions require additional analysis and decision-making and are prioritized as part of the BLM budget process. Priorities for implementing one-time RMP decisions will be based on the following criteria:

- Current and projected resource needs and demands
- National BLM management direction regarding plan implementation
- Available resources
- Direction in the Approved RMP for development of implementation level plans

2.1.5.3 Long-term Guidance and Direction During the Life of the Plan

These decisions include the goals, objectives, and management actions established by the plan that are applied during site-specific analyses and activity planning. This also includes standard operating procedures in Appendix A. This guidance is applied whether the action is initiated by the BLM or by a non-BLM project proponent. Long-term guidance and plan direction is incorporated into BLM management as implementation level planning and project analysis occurs.

2.1.5.4 Public Involvement

The BLM will follow the Supplemental Rule process to implement interim OHV weight and width limitations. This is a public process including notice in the *Federal Register* and public meeting(s) in the region. This process is described in Section 2.2.1.

The BLM will develop a transportation and travel management plan within five years of the ROD. Travel management planning is a public process with opportunities for public involvement.

The BLM may engage in other implementation planning in the future, such as recreation area management plans or watershed management plans. These will require preparation of detailed, project level NEPA analysis and include opportunities for public involvement.

As the BLM receives applications for permits or proposes internally driven projects during the life of this RMP, we will conduct detailed project level NEPA analysis including various levels of public involvement. We use public comments to help formulate alternatives to be considered in the analysis and to develop appropriate stipulations and permit conditions.

2.1.6 Maintaining the Plan

Land use plan decisions and supporting information can be maintained to reflect minor changes in data, but maintenance is limited to refining, documenting, or clarifying previously approved decisions. Some examples of maintenance actions include:

- Correcting minor data, and typographical, mapping, or tabular data errors.
- Refining baseline information as a result of new inventory data.

Plan maintenance will be documented in supporting records. Plan maintenance does not require formal public involvement, interagency coordination, or the environmental analysis required for making new land use plan decisions.

The BLM expects that new information gathered from field inventories and assessments, monitoring, research, other agency studies, and other sources will update baseline data and/or support new management techniques, required operating procedures, and scientific principles. Where monitoring shows land use plan actions or Standard Operating Procedures are not effective, modifications or adjustments may occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed.

2.1.7 Changing the Plan

The Steese Approved RMP may be changed, should conditions warrant, through a plan amendment or plan revision process. A plan amendment may become necessary if major changes are needed or to consider a proposal or action that is not in conformance with the plan. The results of monitoring, evaluation of new data, policy changes, or changing public needs might also provide the impetus for an amendment. Generally, an amendment is issue-specific. If several areas of the plan become outdated or otherwise obsolete, a plan revision may become necessary. Plan amendments and revisions are accomplished with public input and the appropriate level of environmental analysis.

2.1.8 Plan Evaluation and Adaptive Management

Evaluation is a process in which the plan and monitoring data are reviewed to determine if management goals and objectives are being met and if management direction is sound. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet resource management plan objectives.

The BLM will use land use plan evaluations to determine if the decisions in the Approved RMP, supported by the accompanying environmental analysis, are still valid in light of new information

and monitoring data. The BLM will generally conduct an evaluation of the Approved RMP every five years, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation. The first plan evaluation will be conducted in fiscal year 2022 and every five years thereafter for the life of the plan. Evaluations will follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1) and 43 CFR Part 1610.4-9 or other appropriate guidance in effect at the time the evaluation is initiated.

As defined by the Office of Environmental Policy and Compliance, adaptive management is a system of management practices based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and, if not, facilitating management changes that will best ensure that outcomes are met or reevaluated. This process builds on current knowledge, observation, experimentation, and learning from experience. A continuous feedback loop allows for midcourse corrections in management to meet planned goals and objectives. In addition, the process provides a model for adjusting goals and objectives as new information develops and when the public recommends management changes.

The Approved RMP is adaptive by the presentation of goals and objectives that focus on reaching outcomes rather than identifying inflexible standards and prescriptions that may not be applicable in certain situations. When land use plan actions or standard operating procedures are found to be ineffective, modifications may occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed. This approach uses on-the ground monitoring, review of scientific information, and consideration of practical experience and common sense to adjust management and modify implementation of the plan to reach the desired outcome.

The watershed monitoring process is outlined in Appendix B, section B.3.1. Additional description of monitoring is included in various sections of the Approved RMP including sections: 2.2.2 “Mitigation”, 2.2.3 “Air and Atmospheric Values”, 2.2.5 “Cultural Resources”, 2.2.6 “Fish and Aquatic Species”, 2.2.7 “Non-native Invasive Species”, 2.2.8 “Paleontological Resources”, 2.210 “Special Status Species”, 2.2.11 “Vegetation”, 2.2.213 “Water Resources, Wetlands, and Floodplains”, 2.2.14 “Wilderness Characteristics”, 2.2.15 “Wildland Fire Management and Ecology”, 2.2.16 “Wildlife Resources”, 2.2.22 “Hazardous Materials”, and Appendix A “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”.

2.2 Management Decisions

This section presents the goals and objectives, lands use allocations, and management actions established for Steese Approved RMP in the Eastern Interior Field Office. This section is organized by program area.

This section describes the management decisions with their related terms and conditions which define the combination of allowable resource uses and levels of production or protection, the program constraints and the general management practices for BLM-managed land within the Steese Planning Area. For activities requiring authorization from BLM, the term “allow” means that proposals for such use will be considered, and environmental impacts and compatibility with objectives will be analyzed. It does not mean that such use is automatically approved.

2.2.1 Access Guidance under Alaska National Interest Lands Conservation Act (ANILCA)

This section provides guidance on implementing sections 811 and 1110(a) of ANILCA. ANILCA provides specific guidance on access for:

- The use of snowmobiles, motorboats and other means of surface transportation traditionally used for subsistence purposes by local residents on all federal public lands (section 811). See ANILCA section 102(3) for the definition of "public lands."
- The use of snowmachines, motor boats, airplanes and non-motorized surface transportation methods for traditional activities and travel to and from homesites, on conservation system units, national recreation areas, and national conservation areas (section 1110).

Pursuant to ANILCA sections 811 and 1110, such uses are subject to reasonable regulation. The National Park Service and U.S. Fish and Wildlife Service have developed regulations to implement section 811 of ANILCA. While the BLM has not developed similar regulations, a process similar to those promulgated by the National Park Service and U.S. Fish and Wildlife Service will be followed.

The BLM will ensure that rural residents engaged in subsistence uses shall have reasonable access to subsistence resources (ANILCA section 811(a)) and will implement restrictions and closures to the use of snowmobiles, motorboats, and other means of surface transportation traditionally employed for subsistence purposes by local rural residents (ANILCA section 811(b)) only if the Authorized Officer determines that such use is causing or is likely to cause an adverse impact on public health and safety, resource protection, protection of historic or scientific values, subsistence uses, conservation of endangered or threatened species, or other purposes, values, and uses for which the lands are being managed under the Federal Land Policy and Management Act or designated by ANILCA[1] (such as a wild and scenic river, national recreation area, or national conservation area, if applicable).

The BLM will follow the regulations implementing section 1110 of ANILCA, as found in 43 CFR part 36. The BLM will implement restrictions and closures to use of snowmachines, motorboats, aircraft, and non-motorized surface transportation methods (for example, domestic dogs, horses, and other pack or saddle animals) for traditional activities only if the Authorized Officer makes a finding, pursuant to 43 CFR 36.11(h), that such use would be detrimental to the resource values of the area.

To meet the requirements of ANILCA, decisions in this Record of Decision and Approved RMP that are covered by sections 811 and 1110 of ANILCA are listed as "Proposed" Supplemental Rules. In addition, because transportation and travel management planning is deferred, Proposed Interim Supplemental rules are identified to address more immediate issues until the travel management plan is completed. After the resource management plan record of decision is signed, the BLM will undertake the following process to implement both proposed interim and proposed final Supplemental Rules identified in section 2.2.20.

[1] Closure criteria pursuant to National Park Service regulations at 36 CFR 13.460(b) and U.S. Fish and Wildlife regulations at 50 CFR 36.12(b).

- Publish and provide notice of proposed Supplemental Rules in the *Federal Register* and other formats and locations reasonably calculated to inform residents in the affected vicinity.
- Allow a minimum of 60-days for the public comment period on the proposed Supplemental Rules.
- Hold public hearings in the affected vicinity and other locations as deemed appropriate by the BLM.
- Respond to comments and publish the final Supplemental Rules in the *Federal Register*.
- Make the final Supplemental Rules known by the following methods (at a minimum):
    - Supplemental Rules and maps with relevant information will be available for public inspection at the BLM office and at other places convenient to the public, and locations and formats reasonably calculated to inform residents in the affected vicinity.
    - Post signs at appropriate sites.
    - List Supplemental Rules and show relevant maps on BLM brochures and websites.

The Supplemental Rule process described above will be followed to address any travel management plan decisions that are covered by Sections 811 and 1110 of ANILCA. However, the public notification in the *Federal Register* and the ANILCA requirement for hearings will be incorporated into the NEPA process.

2.2.2 Mitigation

The BLM will apply mitigation measures to BLM-authorized activities within the Steese Planning Area in order to achieve land use plan goals and objectives while continuing to honor the BLM multiple-use mission. The BLM is directed to implement mitigation measures by Presidential Memorandum: *Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment* (November 3, 2015) and Department of the Interior Manual 600 DM 6 (October 23, 2015). The BLM is currently developing a mitigation manual and handbook.

The sequence of mitigation action will be the mitigation hierarchy identified by the White House Council on Environmental Quality (40 CFR 1508.20). This hierarchy prioritizes mitigating impacts at the time and location of the implementation-level activities (such as land-use authorizations), which must be in conformance with the land use plan goals and objectives.

Mitigation would be achieved through impact avoidance, minimization, rectification, and reduction over time of the impact, including those measures described in laws, regulations, policies, and the Steese Approved RMP. When these types of mitigation measures are not sufficient to meet the resource management plan goals and objectives, additional measures to compensate for residual impacts may be required.

The mitigation approach will incorporate the following general principles:

1. **Avoid, minimize, rectify, reduce or eliminate the impact over time, and compensate.** The sequence of mitigation action will be the mitigation hierarchy (avoid, minimize, rectify, reduce or eliminate over time, compensate), as identified by the White House Council on Environmental Quality (40 CFR 1508.20). Compensatory mitigation requirements may apply

to implementation-level activities whose impacts the agency cannot adequately avoid, minimize, rectify, reduce or eliminate over time (residual impacts) to meet land use plan goals.

2. **Regional Mitigation Approach.** A regional approach to mitigation would include preparing a prioritized assessment of degraded areas in need of restoration and areas important for preservation across the relevant landscape. This prioritized list would provide the basis for mitigation required for implementation level activities and focuses on attaining the maximum mitigation benefit on a landscape basis.
3. **Monitor mitigation projects and measures and make adaptive changes.** The BLM land use authorization decision documents that require compensatory mitigation as a condition of the permit approval should identify project level monitoring and adaptive management requirements. This will ensure the mitigation and adaptive management requirements are implemented as designed, remain effective during the life of the project's impact, and management is adjusted as necessary based on lessons learned and new science.
4. **Use the best available science.** The best available scientific principles, standards and practices for mitigation shall be used when determining implementation level mitigation requirements.
5. **Be consistent and fair.** The mitigation program should apply consistently across activities that result in direct, indirect, or cumulative impacts within the planning area.
6. **Durability.** The BLM should ensure that mitigation conducted outside the area of impact, will at a minimum, be effective for as long as the land-use authorization affects the resources and values.
7. **Additionality.** A compensatory mitigation measure that improves the baseline conditions of the impacted resource, and is demonstrably new and would not have occurred without the compensatory mitigation measure.

2.2.3 Air and Atmospheric Values

Goals

All direct or authorized emission-generating activities, such as placer mining or BLM facilities development, occurring on BLM-managed lands within the planning area will comply with federal and State air quality laws and regulations.

Protect and maintain air quality of BLM-administered lands consistent with federal and State attainment, nonattainment, or maintenance classification status for atmospheric emissions and pollutants, including noise, smoke management, and visibility.

Coordinate, cooperate, and consult with federal, Tribal, State, and local regulatory agencies, and with other appropriate land management agencies, to resolve air resource issues that may impact BLM-administered lands.

Collaborate with other federal, State and local regulatory agencies, Tribal governments, user groups, and BLM offices to support a coordinated Air Resource Management Program consistent with a science-based adaptive management approach to air resource management.

Decisions

Air-1: Implement interagency wildland fire smoke effects mitigation measures adopted by the Alaska Wildland Fire Coordinating Group. Consider smoke effects on human health, communities, recreation, and tourism in all wildland and prescribed fire management activities.

Air-2: Ensure BLM activities, programs, and projects comply with all applicable federal, State, Tribal, and local air quality laws, statutes, regulations, standards, and state implementation plans, including applicable general and transportation conformity regulations within EPA designated nonattainment or maintenance areas, consistent with the Clean Air Act and FLPMA.

Air-3: Inventory, model, analyze, and monitor air resources on an annual, biannual, or quarterly schedule, or as directed by resource managers, to evaluate conditions and trends and their potential impacts on and from BLM-authorized activities, consistent with science-based adaptive management.

Air-4: Where BLM activities, programs, and projects or BLM-authorized activities have the potential to impact visibility, evaluate the extent of the potential impact and consider mitigation. Areas where BLM may analyze potential visibility impacts include mandatory Federal Prevention of Significant Deterioration Class I and adjacent areas, wildland/urban interface areas, National Landscape Conservation System units, and in or near areas that contain special natural resources.

Air-5: When BLM programs, projects, and/or use authorizations have the potential to affect existing resources that may be sensitive to noise such as public health and safety, wildlife, heritage resources, wilderness, wildland/urban interface areas, and other special value areas (such as Research Natural Areas and National Landscape Conservation Areas), consider noise and its potential impacts on the public and the environment, as well as any appropriate mitigation measures, during the planning and authorization review process.

Air-6: Where applicable, utilize guidance in the June 23, 2011 MOU Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process, among the USDA, DOI, and the EPA and will incorporate updates or revisions as available.

Air-7: Ensure BLM activities, programs, and projects utilize CEQ issued guidance (December 2014), providing direction for federal agencies on when and how to consider the effects of GHG emissions and climate change in their evaluation of all proposed federal actions in accordance with the National Environmental Policy Act (NEPA) and the CEQ regulations implementing the procedural provisions of NEPA (CEQ Regulations 42 U.S.C. § 4321 et seq.; 40 CFR Parts 1500-1508). Incorporate updates or revisions to the CEQ guidance as available.

2.2.4 Cave and Karst Resources

Goal

Manage significant cave and karst systems to protect and maintain their resource, educational, scientific, and recreational values in accordance with the Federal Caves Resource Protection Act of 1988 and 43 CFR 37.11.

Decisions

Cave-1: Manage Sheep Cave, AK-028-003, as a significant cave.

Cave-2: Management objective: Preserve Sheep Cave for scientific use and values.

Cave-3: Setting Prescription: Semi-Primitive

Cave-4: Administrative designation: Located within the Steese National Conservation Area (Map 10). No additional designation recommended.

2.2.5 Cultural Resources

Goals

Identify, preserve and protect significant cultural resources by a variety of means; including site avoidance or conservation, site stabilization, monitoring, public awareness programs, and/or data recovery to ensure that these resources are available for appropriate uses by present and future generations.

Identify and manage cultural resources for a variety of present and future uses, including scientific use, conservation for future use, public use, traditional use, and experimental use, or else discharge from further management.

Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resources by ensuring that all authorizations for land and resource use comply with “Section 106” National Historic Preservation Act (NHPA) [54 USC 306108].

Decisions

Cult-1: Designate all cultural sites for scientific use.

Cult-2: Provide permits for archaeological investigation (following 43 CFR 7), along with any other authorizations for individuals or institutions conducting archaeological investigations on public lands, and ensure that artifacts remain in federal custody.

Cult-3: Avoid impacts to cultural resources by project redesign, project abandonment, and/or mitigation of adverse impacts through scientific recovery and analysis. When impacts to cultural resources cannot be avoided, complete a Determination of Eligibility to the State Historic Preservation Office to determine a site’s significance and eligibility to the National Register of Historic Places, and follow prescribed NHPA "Section 106" [54 USC 306108] consultation for all sites determined eligible. If a site is determined eligible, develop a memorandum of agreement (MOA) to mitigate the action.

Cult-4: Conduct pro-active field survey for cultural resources (“Section 110” of NHPA), when funding allows. Base prioritization of NHPA "Section 110" field surveys and inventories [54 USC 306102(b)(1)] on (1) a reasonable combination of expected development activities on the public land, (2) “values” related to the resource itself, such as rareness, uniqueness, density on the landscape, and other characteristics inherent in the resource itself, and (3) a record of previous cultural surveys in an area.

Cult-5: Base prioritization of cultural sites for rehabilitation, stabilization, and restoration upon the “value” of the resource (i.e., NRHP eligible; uniqueness; rarity), along with other recreational or public uses, and other BLM land or resource use considerations.

Cult-6: Systematically monitor threatened sites on an established schedule, and monitor other sites as opportunities or funds become available.

Cult-7: Allow for both destructive and non-destructive cultural resource data recovery by qualified BLM personnel for both "Section 106" mitigative projects as well as non-"Section 106", research oriented projects, where “destructive” refers to archaeological excavation and extensive sub-surface testing and non-destructive refers to mapping, photography, and other means of non-disturbance site recordation.

Cult-8: Maintain an inventory of archaeological sites and localities for the planning area. The locations of these sites and localities are protected by federal law from disclosure to the public, certain exceptions aside, so as to better protect them.

2.2.6 Fish and Aquatic Species

Goals

The following goals are consistent with the National Fish Habitat Action Plan (NFHAP 2006) and BLM Instruction Memorandum 2009-141:

Maintain water quality that satisfies state standards and provides for stable and productive riparian and aquatic ecosystems.

Maintain stream channel integrity, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed.

Manage instream flows to support healthy riparian and aquatic habitats, which promote the stability and effective function of stream channels, and the ability to effectively route flood discharges.

Maintain natural timing and variability of the water table elevation in meadows and wetlands. Manage for diversity and productivity of native plant communities in riparian zones.

Manage riparian vegetation to:

- Provide an amount and distribution of large woody debris characteristic of intact natural aquatic and riparian ecosystems;
- Provide adequate summer and winter thermal regulation within the riparian and aquatic zones; and,
- Help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed.

Manage habitat to support populations of well-distributed native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.

Decisions

Priority Species

Fish-1: Where priority species are present, manage and monitor habitats to promote self-sustaining populations. Priority aquatic species are those species utilized for subsistence, designated as BLM sensitive, federally listed under the Endangered Species Act, and/or

recreationally important species. Table 3 lists the current priority aquatic fish species that occur in the Planning Area. Cooperate and coordinate with state agencies, federal agencies, Native organizations, and other groups to ensure efficient and effective program implementation toward conservation of native and desired, non-native aquatic species.

Fish-2: Cooperate and coordinate with state agencies, federal agencies, Native organizations, and other groups to ensure efficient and effective program implementation toward conservation of native and desired, non-native aquatic species.

Table 3. Priority fish species in the Steese Planning Area

Common Name	Scientific Name	Priority Status
Chinook salmon (King)[A]	*Oncorhynchus tshawytscha*	Subsistence, recreation
Chum salmon[A]	*Oncorhynchus keta*	Subsistence, recreation
Coho salmon[A]	*Oncorhynchus kisutch*	Subsistence, recreation
Arctic grayling	*Thymallus arcticus*	Subsistence, recreation
Humpback whitefish[AR]	*Coregonus pidschian*	Subsistence
Round whitefish [AR]	*Prosopium cylindraceum*	Subsistence
Whitefish (unidentified)[AR]	*Coregoninae*	Subsistence
Least cisco[AR]	*Coregonus sardinella*	Subsistence
Sheefish[AR]	*Stenodus leucichthys*	Subsistence, recreation
Northern pike	*Esox lucius*	Subsistence, recreation
Burbot	*Lota lota*	Subsistence, recreation
Alaska brook lamprey	*Lampetra alaskense*	BLM sensitive

A = Anadromous fish species
AR = Species that may be either anadromous or resident species

Desired Future Conditions for Aquatic Species

Fish-3: Develop and implement appropriate management practices to maintain the following desired future conditions for aquatic species:

- Maintain habitats historically occupied by native aquatic species (fish, invertebrates, plants and other aquatic-associated species) to promote continued occupation.
- Develop and implement habitat management plans and strategies for special status fish and aquatic species that include specific habitat and population management objectives designed for conservation, as well as management strategies necessary to meet those objectives.
- Monitor spatial extents of habitat disturbances to ensure disturbances are less than the area occupied by priority species, in order to preserve population structure and life history strategies.
- Cooperate to ensure aquatic habitats are managed consistently with federal, state and Native fish population goals.

Priority Habitats

Fish-4: Identify and manage for priority habitats. Priority habitats are those habitats that support any life stages of priority aquatic species, which includes both resident and anadromous fish species. Due to the extensive amounts of aquatic habitat in the planning area considered priority habitats, the BLM identified the highest priority areas for aquatic species.

Approximately 71 watersheds in the Steese Planning Area contain BLM-managed fisheries habitat. An analytical approach was developed to categorize and evaluate watershed resource values. This process is described in Appendix B "Fisheries and Aquatic Resources". In summary, the process categorized all watersheds containing BLM land as either Conservation or Restoration Watersheds based on watershed integrity and historic land use. Conservation Watersheds were those that have processes and functions that occur in a relatively undisturbed and natural landscape setting. Restoration Watersheds were those where biological and physical processes and functions do not reflect natural conditions because of past and long-term human-caused land disturbances. Within these categories, the watersheds were further evaluated to identify those with the highest aquatic habitat resource values using a ten factor rating system (Appendix B "Fisheries and Aquatic Resources"). The Conservation and Restoration Watersheds with the highest values were further categorized as Riparian Conservation Areas and High Priority Restoration Watersheds, respectively.

Fish-5: Identify high priority conservation watersheds as Riparian Conservation Areas (RCAs) and monitor these areas. These watersheds contain the highest fisheries and riparian resource values within the planning area. In these watersheds, riparian-dependent resources receive primary emphasis and management activities are subject to specific requirements described below under Management of Watersheds.

The following 21 watersheds are identified as RCAs (Map 2).

1. Birch Creek (HUC # 190804010207)
2. Birch Creek (HUC # 190804010212)
3. Birch Creek (HUC # 190804010601)
4. Birch Creek (HUC # 190804010606)
5. Fourteenmile Creek-Yukon River (HUC # 190705041906)
6. George Creek-Birch Creek (HUC # 190804010903)
7. Headwaters North Fork Preacher Creek (HUC # 190804011102)
8. Loper Creek (HUC # 190804011201)
9. Lower North Fork Preacher Creek (HUC # 190804011105)
10. McLean Creek-Birch Creek (HUC # 190804010401)
11. Middle Preacher Creek (HUC # 190804011202)
12. Middle North Fork Preacher Creek (HUC # 190804011104)
13. Ninety-eight Pup-Preacher Creek (HUC # 190804011009)
14. Pitkas Bar (HUC # 190804010408)

15. Preacher Creek (HUC # 190804011005)
16. Puzzle Gulch (HUC # 190804010506)
17. Sheep Creek (HUC # 190804010407)
18. Thomas Creek-Birch Creek (HUC # 190804010403)
19. Upper North Fork Preacher Creek (HUC # 190804011103)
20. Yukon River (HUC # 190705041903)
21. Yukon River (HUC # 190705041904)

Fish-6: The following watersheds are identified as High Priority Restoration Watersheds to be managed for active restoration.

1. Harrison Creek (HUC # 190804010406)
2. Twelve-mile Creek (HUC # 190804010205)
3. North Fork Birch Creek (HUC # 190804010206)
4. Volcano-Clums Fork (HUC # 190804010306)

Develop and implement active restoration practices for High Priority Restoration Watersheds. High Priority Restoration Watersheds are identified as those watersheds with the highest resource values. High Priority Restoration Watersheds would generally require active restoration practices to restore physical and biological integrity (High Condition Rating). It is assumed that Restoration Watersheds currently exhibit a Low to Moderate Condition Rating.

Desired Future Conditions for Aquatic Habitats

Fish-7: Identify desired future habitat conditions for fish and aquatic resources. The desired future conditions for aquatic habitats and species must consider an integrated suite of aquatic (including both abiotic and biotic components), riparian (including riparian-associated terrestrial species), and hydrologic (including uplands) conditions. It is desirable that most watersheds, generally should be in or making progress toward a High Condition Rating as described in Appendix B.3.1, Table B-5.

Fish-8: Utilize habitat metrics to help design appropriate management actions or mitigate proposed activities at the site-specific project level, in attempt to move watersheds toward a High Condition Rating. If certain metrics highlight a concern in a watershed, then analysis should disclose how proposed management actions would be designed to take into account the concerns, and/or when the proposed action would lead to achieving objectives. Metric criteria values are not absolute criteria, and are rated in regards to a functional condition or ecological/biological condition.

Desired Future Condition Metrics for Aquatic Habitats

Fish-9: Within all watersheds the desired condition is to provide aquatic habitat to support native vertebrate and invertebrate populations at natural levels. Stream channel conditions are stable and consistent with the surrounding landform and watershed.

Desired stream and riparian habitat conditions are listed below. Many of these values are interim goals based on professional judgment; however, future monitoring of reference aquatic systems will be integrated to refine desired condition targets based on the Adaptive Management and Implementation and Effectiveness Monitoring Processes (Section B.2.1, "Monitoring and Evaluation of the RMP"). The refined targets will be established based upon the upper percentile of values, and stratified by channel type and other factors; such as aspect and elevation.

1. Habitat Connectivity: Native fish species have access to historically occupied habitats.
2. Water Temperature: Cold Water Biota: Habitat complexity provides daily, seasonally, annually and spatially variable water temperatures within expected normal ranges. Consistent with Alaska Water Quality Standards (18 AAC 70) temperatures may not exceed 20 degrees C. at any time. The following maximum temperatures are not exceeded:
    a. Migration routes 15 degrees C.
    b. Spawning areas 13 degrees C.
    c. Rearing areas 15 degrees C.
    d. Egg and fry incubation 13 degrees C.
3. Turbidity: Stream stability levels facilitate balanced sediment aggradation and degradation within the watershed, thereby maintaining seasonally consistent turbidity levels. Turbidity levels would not exceed those outlined in the Alaska Water Quality Standards (18 AAC70).
4. Pool Frequency: Pool frequency would approximate Rosgen (1996) estimates based on channel type.
5. Width to Depth Ratio: Less than or equal to 12:1 for confined channel types (Rosgen channel types A, E and G); less than 20:1 for moderately confined channel types (Rosgen channel type B); and less than 40:1 for unconfined channel types (Rosgen channel types C and F).
6. Channel Substrate Condition: Spawning gravel surface fines (<0.06 mm) in pool tails <5 percent (Bryce et al. 2008).
7. Large Woody Debris (applies to forested systems): Near-natural patterns in size and amount of in-channel, large woody debris and potential wood on stream banks and floodplain.
8. Streambank Stability: Streambank stability greater than 95 percent for A and B and E channel types; greater than 90 percent for C channel types within 80 percent of any stream reach. Streambank stability would be evaluated using the BLM Multiple Indicator Monitoring technique or other appropriate methodology.
9. Riparian and Riparian Conservation Area Vegetation: Riparian and wetland areas in Proper Functioning Condition. Conditions reflect natural disturbances processes. Desired conditions generally mature to late seral community types as outlined in Winward 2000. Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is greater than 80 percent (good-excellent ecological condition). Over 80 percent of the plant community type along the streambank provides high bank stability, deep fibrous roots, good resistance to streambank erosion or is comprised of

anchored rocks/logs. The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.

Management of Watersheds

These decisions apply to all watersheds unless otherwise noted.

Fish-10: Provide and coordinate hydrologic data with the State to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitats.

Fish-11: Implement the standard operating procedures in Appendix A on a project specific basis to: achieve the goals, meet the Desired Future Conditions for aquatic habitats and species, and maintain a thriving natural ecological balance and multiple-use relationship.

Fish-12: Locate water removal sites to minimize impacts on priority species and provide for attainment of desired conditions for aquatic habitats and species.

Fish-13: Utilize the watershed matrix to assist in site-specific project impact analysis (Appendix B "Fisheries and Aquatic Resources") and mitigate impacts identified as potentially degrading to the watershed Condition Rating.

Fish-14: Complete watershed assessments described in section B.5, "Watershed Assessment Process" as necessary for management.

The Following Decisions Apply to Mining Operations on All Watersheds

Fish-15: To avoid unnecessary and undue degradation of public land under notice level mining operations and mining operations requiring a plan of operations, the 43 CFR 3809.420(b)(3)(ii)(E) requires the rehabilitation of fisheries and wildlife habitat. The fisheries and wildlife habitat rehabilitation performance standard requires the operator to rehabilitate or repair damage caused to fisheries or wildlife habitat.

Further, 43 CFR 3809.420(a)(3) requires operations and post-mining land use to comply with the applicable BLM land use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate. The following section outlines planning area and location-specific goals that need to be the focus of a fisheries rehabilitation plan submitted under 43 CFR 3809.301 and 3809.401 in order to meet the fisheries rehabilitation requirement under 43 CFR 3809.420(b)(3)(ii)(E).

For purposes of this plan, the rehabilitation of fisheries habitat is defined as providing aquatic and riparian habitat characteristics that will support fish such that the species and life stage composition and density that occurred prior to disturbance is reestablished. Given the complexity of fisheries habitat rehabilitation in Alaska, reclamation plans will include detailed descriptions of measures to achieve the following three objectives:

1. A stable channel form that is in balance with the surrounding landform such that channel features are maintained and the stream neither aggrades nor degrades. To achieve this, the operator must design a post-mining stream channel using morphological characteristics of the pre-disturbance channel and floodplain (e.g., bankfull and floodprone dimension, meander pattern, design flows and velocity, riffle to pool ratio, substrate particle size). These characteristics could be derived from field surveys of the area, remotely sensed information, or information from adjacent watersheds that exhibit

similar characteristics as the watershed proposed for mining. A key reference used on the national scale for alluvial channel design is The National Resources Conservation Service's *Stream Restoration Design, National Engineering Handbook, Part 654* (NRCS 2007 Chapter 9);

2. Sufficient riparian vegetation or anchored rocks/logs to effectively dissipate stream energy, prevent soil erosion, stabilize streambanks, provide essential nutrient input, and maintain water quality and floodplain function; and,
3. Provide instream habitat complexity similar to that of pre-disturbance levels by the use of instream structures (e.g., vortex rock weirs, cross-vane structures, installation of root wads).

By focusing on these three objectives, the probability of fisheries habitat rehabilitation success is increased. Typically, the operator would satisfy these requirements through the development of a site-specific reclamation plan. Bond release will be based on meeting specific measurable objectives outlined in a reclamation plan (43 CFR 3809.401(b)(3)).

Fish-16: Develop monitoring and associated reporting requirements as part of site-specific plans (i.e., Plan of Operation) to measure impacts and subsequent reclamation success levels. Use monitoring data to adaptively manage existing and future plans of operation to make measurable progress toward desired future conditions in subsequent years following reclamation.

Riparian Conservation Area Specific Requirements

Fish-17: The management goal in RCAs is to: maintain and provide stream channel integrity, ensure riparian proper functioning condition, and achieve desired future conditions for the high-value fish and aquatic resources, and yet allow for surface-disturbing activities.

To increase the likelihood of fisheries habitat rehabilitation within these watersheds, which represent the highest value fisheries resources within the planning area, additional baseline data pursuant to 43 CFR 3809.401 (c) (1) will be required. Within these areas baseline hydrological data that is adequate to characterize seasonal flow patterns and discharge will be required from the operator. The BLM will be available to advise operators on the exact type of baseline data and detail needed to meet this requirement. In addition reclamation requirements in site-specific reclamation plans, will be designed to result in rehabilitation of habitats within an accelerated time frame (e.g., less than five years). To achieve fisheries habitat rehabilitation within five years, rigorous revegetation and streambank stabilization techniques and a high level of monitoring and maintenance will be required.

High Priority Restoration Watersheds

Fish-18: The goal is to manage High Priority Restoration Watersheds to restore physical and biological integrity (High Condition Rating). Within the planning area, federal funding (greater than one million dollars in Abandoned Mine Lands Funds) has been used for the Harrison Creek stream channel and floodplain restoration project.

To ensure that this project and any future restoration projects are not adversely impacted, the following will apply:

All surface-disturbing activities proposed within the same or upstream watersheds of ongoing or completed restoration projects must outline specific measures to adequately mitigate or minimize adverse impacts to the restoration project. This may be accomplished by providing a detailed plan of operations and a reclamation plan demonstrating the use of current best management practices.

Essential Fish Habitat (EFH) Management

Fish-19: Analyze BLM-authorized actions that may adversely affect Essential Fish Habitat either directly or indirectly and coordinate with the National Marine Fisheries Service pursuant to 50 CFR §§ 600.905-.930.

Fish-20: Incorporate additional conservation measures, recommended by the National Marine Fisheries Service in site-specific consultation, to minimize impacts to Essential Fish Habitat.

Fish-21: Implement the measures outlined in Appendix G of the 2005 Alaska Essential Fish Habitat Environmental Impact Statement as appropriate (see Section B.6, "Recommended Conservation Measures for Essential Fish Habitat" of this document).

2.2.7 Non-Native Invasive Species

Goals

Prevent the introduction and spread of noxious and non-native invasive species on and adjacent to BLM-managed lands.

Decisions

NIS-1: Use integrated pest management (IPM) practices to control or eradicate noxious and non-native invasive species.

NIS-2: Within five years of signing the ROD or by management direction, develop a step-down Invasive Species Strategic Management Plan for the Eastern Interior planning area, including the Steese to implement IPM practices, which may include cultural, biological, mechanical, manual, and chemical controls. The plan will incorporate early detection and rapid response efforts and, use the Alaska invasiveness risk ranking (Carlson et al. 2008) to prioritize treatments, and include prevention practices. Prevention practices may include outreach and education, vehicle, boat, OHV, and aircraft cleaning protocols, and use of certified weed-free hay and mulch, gravel, and seed. Additional SOPs and Fluid Mineral Leasin**g** Stipulations for land uses may be developed through the step-down plan.

NIS-3: Complete inventory and mapping for noxious and non-native invasive plants at disturbed sites, along trails, and within the Birch Creek WSR corridor within five years of signing the ROD or by management direction.

NIS-4: Conduct inventory for other non-native invasive species, including insects, pathogens, and other pests, as they are detected moving toward the planning area.

NIS-5: Monitor all inventory and control sites on a rotational basis (every two to three years depending on severity of infestations and treatment method).

NIS-6: Continue to support data management through the Alaska Exotic Plant Information Clearinghouse (AKEPIC) database and the BLM national database (National Invasive Species Management Information System).

NIS-7: Work with the Committee for Noxious and Invasive Plants Management in Alaska, the Alaska Department of Natural Resources, the Alaska Invasive Species Working Group and other agencies, organizations, and groups to coordinate inventory, monitoring, prevention, and control of noxious and non-native invasive species within the planning area.

NIS-8: Adapt management of non-native invasive plants to address climate change and other management issues as new information becomes available.

NIS-9: Minimize the introduction and spread of noxious and non-native invasive plants through use of Alaska certified weed-free products for any action requiring stabilization, reclamation, restoration, or revegetation. When certified products are not available, use native seed and locally produced products.

NIS-10: Comply with the most current BLM Alaska Noxious Weeds and Invasive Species Management policy.

NIS-11: Employ measures outlined in the most current Alaska Aquatic Nuisance Species Management Plan (ADF&G 2002) and the most current Interim Fire Operations Guidance to Prevent Spread of Aquatic Invasive Species (USFS 2016) to reduce the introduction and spread of Aquatic Nuisance Species.

2.2.8 Paleontological Resources

Goals

Manage, protect, and preserve paleontological resources using scientific principles and expertise to ensure that they are available for appropriate uses by present and future generations.

Ensure that proposed land uses initiated or authorized by the BLM avoid or mitigate inadvertent disturbance to federal and non-federal paleontological resources.

Promote stewardship, conservation, and appreciation of paleontological resources through educational and outreach programs.

Decisions

Paleo-1: Require permits for individuals or institutions conducting paleontological investigations for vertebrate fossils and some rare invertebrates on public lands and ensure that fossils remain in federal custody.

Paleo-2: Prior to projects that may result in extensive surface or sub-surface disturbance in areas likely to contain significant paleontological resources, conduct an inventory for paleontological resources. At times, this may be done in conjunction with the inventory for cultural resources but supplemental paleontological expertise may be needed in other cases.

Paleo-3: Comply with federal laws (National Environmental Policy Act; Federal Land Policy and Management Act; Paleontological Resources Preservation Act) and regulations for the preservation of paleontological resources by avoiding impacts to significant paleontological resources through project redesign, project abandonment, and/or mitigation of adverse impacts through scientific recovery and analysis.

Paleo-4: Enable scientific use of paleontological resources by qualified non-BLM personnel for scientific research and public education. Allow the removal of significant paleontological resources by means of a BLM-issued permit, which requires that such resources remain the property of the United States and are preserved for the public in an approved repository.

Paleo-5: Inventory public lands for paleontological resources. Maintain an inventory of paleontological sites and localities. Monitor paleontological sites in danger of alteration or

destruction from natural- or human-made causes. Develop partnerships as feasible to achieve these ends.

2.2.9 Soil Resources

Goals

Ensure that watersheds are in (or are making significant progress toward) a properly functioning physical condition that includes their upland, riparian, wetland, and aquatic areas. The infiltration and permeability rates, moisture storage, and stability of upland soils are appropriate to the watershed's soil, climate, and landform (BLM 2004c).

- Protect the soil surface from erosion; avoid detention of overland flow; maintain infiltration and permeability consistent with the potential/capability of the site.
- Promote moisture storage by soil and plant conditions consistent with the potential/capability of the site.
- Hydrologic, vegetative, and erosion/depositional processes support physical functioning, consistent with the potential or capability of the site.
- Stream channel, lake bed, shoreline characteristics are appropriate for the landscape position.

Ensure that water and nutrient cycling and energy flow support healthy, productive, and diverse natural communities. Water and nutrient cycling and energy flow occur effectively to support healthy, productive, diverse communities at levels appropriate to the potential/capability of the site.

Minimize soil erosion and sedimentation associated with storm water discharge from disturbed sites, particularly where soils and overburden are stripped and stockpiled for an extended period of time.

Decisions

Soil-1: Design all BLM-authorized surface-disturbing activities to reduce soil erosion and minimize impacts to soil profiles. Where permitted operations result in surface disturbance, return land to its pre-disturbance condition to the extent possible. Implement SOPs (Appendix A "Standard Operating Procedures and Fluid Mineral Leasing Stipulations") to reduce soil impacts from surface-disturbing activities.

Soil-2: Where permitted surface disturbing operations result in a total land disturbance of equal to or greater than one acre an Alaska Pollutant Discharge Elimination System permit for Storm Water discharge, will normally be required and would include developing and following a Storm Water Pollution Prevention Plan to manage materials, equipment, and runoff from the site. Most construction, materials, and placer mine operations would be eligible for coverage under a construction or multi-sector industrial activity general permit.

- The Alaska Construction General Permit (ACGP) (AKR100000, Effective May 2011) authorizes storm water discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre and where those discharges enter waters of the United States (U.S.). Construction operations must meet specific Best Management Practices requirements and water quality standards for turbidity.

- The Multi-Sector General Permit for Storm Water Discharge associated with Industrial Activity (MSGP) (AKR060000, Effective April 2015) requires industrial facilities to implement control measures and develop site-specific storm water pollution prevention plans to comply with Alaska Pollutant Discharge Elimination System requirements and meet water quality standards for turbidity. Requirements in Subpart G apply to storm water discharges associated with industrial activity from Metal Mining facilities, including mines abandoned on federal lands. Coverage is required for metal mining facilities that discharge storm water contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, by-product, or waste product located on the site of the operation.

It is anticipated that most materials sites and placer mining operations will need multi-sector industrial activity general permit coverage to address storm water discharge from their industrial activities. Permit coverage is required from the commencement of surface disturbing activities until final stabilization.

2.2.10 Special Status Species

Goals

Manage animal and plant resources and habitats consistent with the conservation needs of Special Status Species (BLM Manual 6840) in a manner that will not contribute to the need to list any species under the Endangered Species Act and to ensure progress towards recovery of any listed threatened or endangered species.

Manage BLM Alaska sensitive species habitats so that actions do not contribute to species decline or contribute to federal listing.

Prevent damage from proposed land uses to habitats supporting Special Status Species.

Identify, conserve, and monitor Special Status Species and habitats to ensure that self-sustaining populations of these species continue to persist in the planning area (i.e., without the need for population supplementation or habitat restoration efforts). Ensure that habitats support healthy, productive, and diverse populations and communities of native plants and animals.

Decisions

SSS-1: Develop a Special Status Species management plan in cooperation with ADF&G. This plan would determine inventory and monitoring needs, priorities and methods, and recommend management actions necessary to conserve these species. Increased inventory may lead to removal of some species from the Special Status Species list.

SSS-2: Develop and implement appropriate site-specific and programmatic management practices to avoid or minimize adverse impacts to sensitive species and their habitats.

SSS-3: If impacts to Special Status Species (populations and habitats) cannot be avoided, the applicant (or the BLM for internal actions) will develop mitigation measures to reduce impacts.

SSS-4: Require the project proponents to complete surveys for Special Status Species when it is determined that the project will impact or may possibly impact potential habitat. The mitigation hierarchy will be implemented if Special Status Species are found during inventories.

SSS-5: Where sensitive status plant species are located, implement measures to protect these populations or individuals through site-specific buffers or management prescriptions, such prohibiting surface occupancy or ground disturbance in occupied habitats, where appropriate. Site new roads and trails away from sensitive plant populations and minimize summer cross-country OHV travel where sensitive plants are located.

SSS-6: Monitor BLM sensitive plant species populations. Where disturbance to individuals or habitat is documented, remove the source of the disturbance to a location that avoids continued damage or implement mitigation to reduce the damage.

SSS-7: Cooperate with partners in inventory and monitoring of rare plant and animal species to improve the knowledge of statewide abundance, distribution, and trends of sensitive species and the development of management strategies at a regional scale.

SSS-8: Where it is found that Special Status Species habitat is likely to be negatively affected by use (i.e., such use is likely to result in a significant local or regional decline in species distribution, abundance, or productivity), such uses will be redirected to other locations, or other mitigation actions that will be effective in preventing local population impacts will be implemented in accordance with BLM 6840 Manual.

SSS-9: Ensure reclamation and restoration plan objectives incorporate the needs of Special Status Species where habitat potential exists.

SSS-10: In restoration watersheds, improve habitats for Special Status Species, particularly riparian and wetland habitats, or other habitats that may support multiple Special Status Species.

2.2.11 Vegetation Resources

Goals

Ensure that watersheds (including their upland, riparian, wetland, and aquatic areas) are making significant progress toward or are in proper functioning condition.

Ensure that water and nutrient cycling, and energy flow support healthy, productive, and diverse natural communities.

Ensure that habitats support healthy, productive, and diverse populations and communities of native plants and animals.

In disturbed areas, rapidly re-establish native plant communities, with locally adapted plants. (Recognizing that temporary establishment of non-native plants may occasionally be necessary to stabilize sites, control erosion, or facilitate eventual establishment of native plants).

Desired Outcome

Veg-1: Maintain the current nature of the vegetation in the planning area which has a natural diversity of species, communities, and seral stages largely undisturbed, except by natural forces.

Decisions

Veg-2: Manage wildland fire to achieve natural fire regimes and ecosystem processes dependent upon fire. Use prescribed fire in select areas to improve wildlife habitat.

Veg-3: In response to shifting fire regimes resulting from climate change, fire management may be implemented to achieve wildlife habitat objectives (e.g., meeting habitat needs for subsistence species) or to facilitate ecosystem adaptation to climate change (e.g., addressing spread of invasive plants).

Veg-4: All firelines will be rehabilitated and closed to OHV use to facilitate revegetation. Rehabilitate firelines by spreading original soil and vegetation on the disturbed ground, except in specific circumstances where seeding or planting may be necessary. Protect vegetation from damage caused by summer OHV use. In specific circumstances where firelines are routed and constructed so that they meet pre-determined travel management needs and maintain resource values, the Authorized Officer (AO) may determine that an exception is appropriate and retain suitable firelines as OHV or snowmobile routes. Fire lines built on existing roads or OHV trails will be returned to conditions suitable for original use.

Veg-5: Manage lichen-rich plant communities as high value habitats due to the slow growth potential of lichen and its great importance to caribou.

Veg-6: When developing travel management plans, minimize impacts through appropriate restrictions on cross-country OHV use. Monitor vegetation for impacts that may be caused by OHVs.

Veg-7: Reduce disturbance of vegetation by minimizing footprint of surface-disturbing activities, consolidating access to minimize the number of routes, and requiring prompt reclamation and revegetation.

Veg-8: Avoid disturbance of the vegetative mat unless it is not feasible to do so. Plans for revegetation of surface disturbances will be addressed during authorization of an action (as outlined in Appendix A.1.1 “SOP Veg-1”).

Veg-9: Utilize and encourage natural revegetation of disturbed sites as the generally preferred method of revegetation (in situations where this is adequate to prevent erosion and will result in rapid establishment of plant cover). In some circumstances, however some combination of seeding, planting, and transplanting of adult plants or vegetation mats, or fertilizing may be necessary.

Veg-10: Native species will be utilized whenever possible if seeding or planting is necessary. Temporary establishment of non-native plants may occasionally be approved by the Authorized officer when it is determined to be necessary to stabilize sites, control erosion, or facilitate eventual establishment of native plants. Vegetation treatment and revegetation requirements are described in SOP Veg-1 in Appendix A, “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”).

Veg-11: Manage riparian and wetland areas to achieve proper functioning condition, or if not at proper functioning condition, to enhance condition rating. Management strategies to achieve proper functioning condition are described in section 2.2.6 “Fish and Aquatic Species”.

Veg-12: Inventory vegetation community composition across the planning area and monitor changes related to climate and fire regime (size, frequency, and severity).

Veg-13: In addition to mapping of fire perimeters, map unburned inclusions within fire perimeters and fire severity on fires 1,000 acres or greater using Monitoring Trends in Burn

Severity standards established by U.S. Geological Service and U.S. Forest Service, or similar interagency standards.

Veg-14: Monitor the area of surface disturbance and areas effectively reclaimed, allowing an estimate of cumulative un-reclaimed surface disturbance.

Veg-15: Map priority habitats and plant communities to facilitate conservation planning and the mitigation of impacts to priority habitats and plant communities.

Veg-16: Conduct watershed assessments as outlined in Appendix B "Fisheries and Aquatic Resources".

Priority Plant Species and Communities

Veg-17: The priority plant communities listed below constitute a small proportion of the planning area, yet support a number and variety of plant and animal species and ecosystem processes.

- Aspen/steppe bluffs (most often occurring as river bluffs)
- Riparian communities
- Wetlands (with a focus on wetlands other than the widespread mesic black spruce and tussock and shrub tussock vegetation types)
- Tall shrub communities
- Sparsely plant covered calcareous substrate (e.g., limestone)
- Lichen-rich habitats

Veg-18: Priority plant species are plants on the BLM Alaska Sensitive Species and BLM Alaska Watch lists.

Veg-19: In areas of potentially sensitive habitats, prepare and utilize ecological mapping to identify unique, rare, or high-value plant species, communities, and habitats and to allow development of mitigation.

2.2.12 Visual Resources

Goals

Maintain and manage visual resource values in accordance with Visual Resource Management (VRM) Classes.

Decisions

VRM-1: Designate all BLM-managed lands into one of the following VRM Classes. VRM Class allocations are described in Table 4 and shown on Map 3.

VRM Class I: Preservation of the landscape is the primary management goal. This class provides for natural ecological changes; it does not, however, preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

VRM Class II: The objective of this class is to retain the existing character of the landscape. Activities or modifications of the environment should not be evident or attract the attention of

the casual observer. Changes should repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

VRM Class IV: The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. Changes may attract attention and be dominant landscape features, but should reflect the basic elements of the existing landscape. Class IV rating is generally reserved for areas where the visual intrusions dominate the view shed but are in character with the landscape.

Table 4. Visual resource management allocations for the Steese Planning Area

Area	RSC Class	VRM Class	Acres
Mount Prindle RNA, and Big Windy RNA RMZs	Primitive	I	3,000
Birch Creek RMZ (inclusive of Birch Creek WSR)	Semi-Primitive	I	100,000
Pinnell Mountain and Wolf Creek RMZs	Semi-Primitive	II	421,000
Preacher Creek RMZ	Backcountry	II	488,000
Bachelor Creek and Clums RMZs	Middlecountry	IV	120,000
Harrison Creek RMZ	Frontcountry	IV	114,000
Remaining BLM lands	N/A	IV	36,000

2.2.13 Water Resources, Wetlands, and Floodplains

Goals

Watersheds: Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian, wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

Water Quality: Protect, restore, and maintain the natural chemical, physical, and biological quality of surface and ground waters, wetlands, and floodplains influenced by BLM resource management activities. Ensure full compliance with applicable federal and state laws and executive orders.

Water Quantity: Protect, restore, and maintain the natural flow regime, water levels, and integrity of surface and ground waters influenced by BLM resource management activities.

Water Rights: Ensure availability of surface and ground water for public land management purposes by acquiring and protecting federal reserved water rights and water rights obtained through state-based administrative and judicial systems. Ensure full compliance with applicable federal and state laws.

Wild and Scenic Rivers: Each Wild and Scenic River component will be managed to protect and enhance the values for which the river was designated with protection of water quality and quantity as a principal goal.

Science-based Adaptive Management: Coordinate, cooperate, and consult with federal, tribal, state, and local agencies, private landowners, and stakeholder organizations in order to foster a unified, science-based adaptive management approach to water resource management.

Assessment and Monitoring: Provide a unified framework for BLM's science-based watershed approach to management of natural and developed water systems consistent with federal and state water quality and quantity assessment methods, including monitoring, sampling, and reporting protocols.

Decisions

Water-1: Ensure BLM activities, programs, and projects comply with all applicable federal, State, Tribal, and local water quality, wetland, and floodplain laws, statutes, regulations, standards, and state implementation plans, consistent with executive orders, the Clean Water Act, and FLPMA.

Water-2: Develop regional scale water quantity and water quality monitoring strategies in cooperation with other federal and State agencies consistent with science-based adaptive management.

Water-3: Focus management on entire watersheds using an ecosystem approach involving all interested landowners and affected parties when feasible.

Water-4: Compile summary reports on a rotational basis (every three or four years, or more frequently as necessary) for inventory and monitoring data collected to support Birch Creek WSR instream flow water rights and water quality.

Water-5: Consistent with the Antidegradation Policy in the Alaska Water Quality Standards (18 AAC 70.015) all segments of Birch Creek are nominated as Tier 3 waters, also referred to as Outstanding National Resource Waters. See 18 AAC 70.015(a)(3).

Water-6: Where permitted surface disturbing operations result in a total land disturbance of equal to or greater than one acre an Alaska Pollutant Discharge Elimination System permit for Storm Water discharge, will normally be required and would include developing and following a Storm Water Pollution Prevention Plan to manage materials, equipment, and runoff from the site. Most construction, materials, and placer mine operations would likely be eligible for coverage under the Alaska Construction General Permit (ACGP) (AKR100000, Effective May 2011) or the Multi-Sector General Permit for Storm Water Discharge associated with Industrial Activity (MSGP) (AKR060000, Effective April 2015). Permit coverage would be required from the commencement of surface disturbing activities until final stabilization.

Water-7: Within five years of signing the ROD or by management direction, undertake development of a step-down Watershed Management Plan (WMP) for Birch Creek Wild and Scenic River watershed, Steese South National Conservation Area, and Preacher Creek watershed, Steese North National Conservation Area. Watershed planning helps address water quality problems in a holistic manner by fully assessing the potential contributing causes and sources of pollution including uplands, then prioritizing restoration and protection strategies to address these problems. Watersheds vary widely in physical, chemical, and biological characteristics, resource conditions, and local use impacts. Therefore, the objectives and management designed for an area shall be tailored to the conditions, conflicts, capability and improvement potential, and land use considerations on a watershed-specific basis. Site specific soil and water management determinations (e.g.,

watershed, floodplain-wetland, or riparian rehabilitation techniques, monitoring techniques and schedule, and the design and placement of improvements) will be developed in the interdisciplinary Watershed Management Planning phase for resource programs. The "Watershed Assessment Matrix" (Table B.5), depicting range of desired conditions for aquatic habitats would be incorporated in the Watershed Management Plan as well as other science-based watershed assessment tools. Relevant new science and new empirical water resource data would also be incorporated in the WMPs. Additional SOPs and Fluid Mineral Leasing Stipulations for land uses may be developed through the step-down WMP.

Water-8: Systematically inventory, model, analyze, and monitor water resources on an established schedule in order to evaluate conditions and trends and their potential impacts on and from BLM-authorized activities consistent with science-based adaptive management principles.

Water-9: Prioritization of disturbed stream sites for rehabilitation, stabilization, and restoration will be based upon an interdisciplinary team site assessment and other BLM land or resource use considerations. Consider the extent to which the site may deteriorate if restoration or improvement action is not immediately implemented. Areas that may suffer further degradation and have potential for improvement should be given top priority. Those that have been degraded but appear stable may be given lower priority for restoration and improvement. Other factors, such as special status species, water quality, competing water uses, fisheries, and recreation values should also be considered when establishing priorities.

Water-10: Utilize available USFWS National Wetlands Inventory database and maps in determining wetland classification for a particular site. Where published National Wetlands Inventory maps are not available other federal or State wetland maps will be utilized. Where federal or State maps are not available BLM or other agency personnel with wetland expertise will use published federal guidance to determine wetland classification.

Water-11: Procedures for implementing Executive Order 11988, Floodplain Management are set forth as an 8-step decision-making process outlined in Part II of the 1978 Water Resources Council Guidelines. When an action is proposed in a floodplain, the 8-step procedural process will be addressed and integrated in developing land use authorizations.

Water-12: Approach restoration and enhancement of floodplain areas through management of the entire watershed rather than just focusing on a narrow floodplain-riparian zone. Prior to initiating restoration measures, a determination must be made of site potential and the primary causes of a degraded ecological condition. The natural recovery processes operating in an area should be evaluated prior to considering structural measures. While stream systems and watersheds are undergoing major geomorphic or hydrological adjustment, structural measures should not be initiated. Consider implementing structural measures only if (1) proper management prescriptions will not achieve management objectives within the desired time frame, (2) costs incurred to achieve accelerated rehabilitation are justified by the benefits to be achieved, and (3) natural recovery has not progressed to a point that will stabilize stream banks and/or wetlands basins.

Water-13: In setting reclamation priorities for floodplain-wetland areas, consider the extent to which the floodplain-wetland may deteriorate if restoration or improvement action is not immediately implemented. Floodplain-wetland areas that may suffer substantial further degradation and have high potential for improvement should be given top priority. Those that have been degraded but appear stable may be given lower priority for restoration and

improvement. Other factors, such as special status species, water quality, competing water uses, fisheries, and recreation values should also be considered when establishing priorities.

Water-14: To the extent it is economically and operationally feasible the BLM and/or cooperating agencies will operate and maintain long-term daily stream gage(s) near the beginning and/or end of the 110 mile Birch Creek Wild River Segment, consistent with the latest U.S. Geological Survey Standards and Methods. The gage should have satellite telemetry capability reporting hourly stage, discharge, water temperature, water turbidity, air temperature, and precipitation with data available on a public website.

Water-15: At the direction of management, monitoring of previously mined high priority restoration watersheds, Harrison Creek, Twelve-mile Creek, and Clums Fork will include measuring discharge and water quality parameters at least annually.

2.2.14 Wilderness Characteristics

Goal

In areas identified for minimization of impacts to wilderness characteristics (Map 4), retain wilderness characteristics including naturalness, solitude, and outstanding opportunities for primitive and unconfined recreation to the extent possible while allowing for other multiple use activities.

Objective

Reduce impacts of multiple-use activities to maintain naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values on approximately 1,009,000 acres.

Decisions

LWC-1: The following activities, uses, and decisions may occur in areas identified as lands where wilderness characteristic will be maintained. Allowable activities are not limited to activities and uses listed below. The listed activities are those protected under ANILCA.

- Cross-country snowmobile travel with adequate snow cover
- Motorboat use
- Airplane use, including primitive, unimproved landing areas
- Temporary structures and equipment placement related to hunting, fishing, and trapping
- Public use cabins and other small facilities for visitor safety and recreational use
- Limited OHV use
- Access for subsistence use and commercial activities including rights-of-way or other types of permits

LWC-2: Manage approximately 258,000 acres emphasize other multiple uses as a priority over protecting wilderness characteristics.

LWC-3: Manage approximately 1,009,000 acres to emphasize other resources values and multiple uses while applying management restrictions to reduce impacts to wilderness

characteristics. These lands are located within the crucial caribou and Dall sheep habitat, and Primitive, Semi-Primitive, and Backcountry recreation management zones (Map 4).

LWC-4: Do not manage any lands to protect wilderness characteristics as a priority over other resource values and multiple uses.

LWC-5: Monitor wilderness characteristics through this NEPA process. Conduct on-the-ground or aerial monitoring in conjunction with monitoring for other resources.

Rationale: BLM Manual 6320 outlines three outcomes of considering wilderness characteristics in the land use planning process, including, but not limited to: (1) emphasizing other multiple uses as a priority over protecting wilderness characteristics; (2) emphasizing other multiple uses while applying management restrictions (conditions of use, mitigation measures) to reduce impacts to wilderness characteristics; and (3) the protection of wilderness characteristics as a priority over other multiple uses. The Eastern Interior Proposed RMP/Final EIS considered outcomes (1) and (2). The BLM will consider wilderness characteristics during site specific NEPA analysis and project permitting. The purpose of doing this is to analyze the effects of the proposed action to the inventoried condition of the lands. In areas managed as (1) the Authorized Officer may choose not to specifically mitigate impacts to the wilderness character in keeping with the allocation decision in the Approved RMP, although mitigation for other resources may have the effect of reducing impacts to wilderness characteristics. For example requiring site reclamation and revegetation to reduce erosion would contribute to maintaining naturalness of the site. Under (2) measures will be applied to reduce impacts to size, naturalness, opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation.

Through a wilderness characteristics inventory, the Eastern Interior Field Office determined that 99 percent of BLM lands in the Steese Planning Area have wilderness characteristics. Given the large size of most of wilderness inventory units in the planning area, many land uses could occur without impacting naturalness, solitude, or primitive recreation on a landscape scale, or the size of the inventory units. Management for other resource drivers such as recreation, wild and scenic rivers, vegetation, fish, and wildlife are complementary to maintaining wilderness characteristics.

ANILCA allows certain uses in Wilderness areas in Alaska. Since these uses are allowed in designated Wilderness, these uses could also occur on lands with wilderness characteristics while still maintaining those characteristics. In the planning area, maintaining wilderness characteristics is consistent with ANILCA-protected uses and facilities, including: snowmobile and motorboat use; other means of surface transportation traditionally employed for subsistence purposes; airplane landings; temporary structures related to hunting, fishing and trapping; and public use cabins (ANILCA sections 811, 1110, 1315(d), and 1316(a)).

2.2.15 Wildland Fire Ecology and Management

Goals

Protection of human life is the single overriding priority. Other priorities are based on the values to be protected, human health and safety, and the costs of protection.

Respond to all wildfires, with an emphasis on firefighter and public safety, and ensure that costs are commensurate with the values to be protected.

Use wildland fire, and other treatments to maintain or restore ecological systems and to meet land use and resource management objectives.

Prevent human caused wildfires.

Reduce risk and costs of wildfire by managing wild fires to meet resource objectives and implementation of fuels management projects.

Reduce adverse effects of wildland fire management activities.

Decisions

Fire-1: Cooperate and collaborate with other federal, state, and Native land managers, and with other suppression organizations to address issues and concerns related to wildland fire management in Alaska and to implement operational decisions.

Fire-2: Allow fire on the landscape while applying four wildland fire management options for initial response: Critical, Full, Modified, and Limited. Ensure that assigned wildland fire management options are ecologically and fiscally sound, operationally feasible, and sufficiently flexible to respond to changes in fire conditions, land use patterns, resource information, new technologies, and new scientific findings. Throughout the planning area, fire may be managed for multiple objectives. These wildland fire management options will be revisited by the Field Office annually and changed as needed to ensure the most effective initial response from the protection agency. Option changes will be documented on the official map atlases maintained by the Alaska Interagency Coordination Center and the respective Protection Zone/Area.

Common indicators for changing fire management options include:

- A value to protect appears on the landscape (i.e. new neighborhood, structures is determined to have historic value, critical caribou habitat mapping); a value to protect disappears from the landscape.
- A non-standard response was required for a wildfire the year previous and justifies the need for a change in that area.
- A fire or other disturbance changes the fuel structure.
- Another agency proposes an inter-agency change involving the BLM for the previously described reasons.

The designation of a management option pre-selects initial response to accomplish established land use and resource objectives. Initial fire response for each fire management option is listed in Table 5.

Fire-3: Implement the Standard Operating Procedures listed in Appendix A during wildland fire management activities.

Table 5. Fire management options for the Steese Planning Area

Management Options	Critical	Full	Modified	Limited
Initial Fire Response (AWFCG 2016)	Mobilize resources to protect the area and/or sites and suppress the fire without compromising public or firefighter safety.	Mobilize resources to protect the area and/or sites and suppress the fire without compromising public or firefighter safety.	Pre -conversion date: Mobilize resources to protect the area and/or sites and suppress the fire without compromising public or firefighter safety. Post-conversion date: Conduct surveillance, assessment, and site protection as warranted.	Conduct surveillance, assessment, and site protection as warranted.
Priority for firefighting resources	1	2	3	4

Fire-4: In addition to these wildland fire management options, some actions will be taken to protect specific sites that have been identified for special fire management protection. Site-specific actions may be taken to protect structures, cultural and paleontological sites, small areas of high resource value, and threatened and endangered species habitat to give suppression agencies more specific guidance for small sites.

Fire-5: Monitor vegetative communities for cumulative effects of wildland fire, suppression activities, and effects of excluding fire.

Fire-6: The desired future condition for BLM-managed lands is to be in Fire Regime Condition Class 1, which represents landscapes still within the natural historical range of variation in fire regime.

In response to shifting fire regimes resulting from climate change, fire management may be implemented to achieve wildlife habitat objectives (e.g., meeting habitat needs for subsistence species) or to facilitate ecosystem adaptation to climate change (e.g., addressing spread of invasive plants).

Fire-7: Fuels management activities assist in achieving resource objectives. Prescribed burning, mechanical and manual treatments may also be used. Projects may be implemented in support of scientific research and in cooperation with BLM cooperators and partners.

Fuels treatments are prioritized to:

1. Reduce the risk to human life and inhabited property. Highest priority for fuel treatments would be those communities surrounded by hazardous fuels.
2. Reduce the risk and cost of wildland fire suppression in areas of hazardous fuels buildup.
3. Achieve other resource objectives such as habitat needs.
4. Achieve desired future condition of Fire Regime Condition Class 1.

2.2.16 Wildlife Resources

Goals

Maintain natural ecosystem functions and the quality and quantity of habitat to support healthy populations of wildlife.

Priority will be given to maintaining the value of crucial caribou and Dall sheep habitat and ungulate mineral licks.

In cooperation with ADF&G, monitor wildlife populations and habitats and manage BLM lands to conserve and enhance fish and wildlife populations. Ensure optimum, self-sustaining populations and a natural abundance and diversity of wildlife resources.

Maintain and protect subsistence resources and opportunities. Determine how management actions, guidelines, and allowable uses prescribed in response to the other issues will affect subsistence opportunities and resources. Monitor populations and habitats to ensure opportunities for subsistence harvest of wildlife.

Minimize impacts to wildlife species and their habitats from BLM-authorized activities on BLM-managed lands.

Protect habitats important to wildlife population maintenance by the avoidance of possible adverse effects of land use activities, through mitigation and by reserving specific areas from certain land use activities.

Maintain a diversity and abundance of wildlife habitat that will provide resilience in adaptation to changing climate.

Ensure opportunities for wildlife viewing, fishing, hunting, and trapping.

Locate trails and recreational development to avoid conflicts with important and priority wildlife habitat and environmentally sensitive areas.

Maintain and restore riparian and wetland areas so that they provide habitat diversity and healthy riparian and aquatic conditions for riparian and wetland dependent species and other wildlife species.

Decisions

Wild-1: In the Steese National Conservation Area, manage present and historical caribou habitat as a primary land use. Emphasis will be placed on managing the area to maintain the opportunity for the Fortymile caribou herd to utilize both present and historical use areas.

Wild-2: Inventory and monitor caribou range (forage) conditions in the Steese National Conservation Area in cooperation with other land and wildlife managers. These efforts will include analyses of the impacts of climate change on fire regimes and caribou forage, and recommendations for management of Fortymile caribou herd habitats.

Wild-3: In caribou winter range, plan travel management and development of facilities (such as maintained trails and cabins), in a manner that would result in a level of off-trail over-snow vehicular travel that will maintain continued availability of the area for use by wintering caribou. Develop adaptive management standards and strategies. Monitor over-snow motorized use in

these areas and, if it approaches a level which may result in reduced use by wintering caribou, implement changes in maintained trails. If necessary, limited area or season closures may be enacted.

Wild-4: Manage the caribou migration corridor on BLM-managed lands (Map 6) as follows:

- Closed to mineral location, entry, and leasing.
- Limit summer motorized travel to existing routes or designated trails. Route density will be limited to ensure free movement of caribou between upper Birch Creek, the north Steese National Conservation Area, and the White Mountains National Recreation Area (NRA).
- Consider impacts of developments in the corridor, including state and private land, and ensure it does not significantly impact the ability of caribou to migrate to historically used and biologically important habitats. Through activity level planning, develop a management threshold density goal for BLM lands, limiting linear disturbance per unit area. Propose a cooperative effort with ADNR and ADF&G to develop a plan (such as a Habitat Management Plan) to maintain connectivity and effectiveness of habitat in the area.

Wild-5: Develop a caribou habitat management plan for the historical range of the Fortymile caribou herd. In cooperation with other land managers and ADF&G, utilize a combination of on-the-ground inventory and remote sensing of caribou habitat, along with caribou habitat use and distribution data, to develop the plan.

Wild-6: Manage approximately 457,000 acres as crucial caribou and Dall sheep habitat (Map 5) to protect caribou calving and postcalving habitat, Dall sheep habitat, and ungulate mineral licks. Management of these areas will give priority to maintaining habitat effectiveness—the ability of habitats to support Dall sheep and caribou—including the following management:

- Ungulate mineral licks: Within a distance of one mile of designated ungulate mineral licks, limit all permitted uses and development of facilities for permitted uses, from May 10 through August 31 to activities which would not reduce sheep use of licks.
- Limit density of trails within crucial caribou and Dall sheep habitat to protect values for which they were designated.
- Within crucial caribou and Dall sheep habitat cross-country winter use of vehicles weighing more than 1,500 pounds curb weight will not be allowed without a permit. Cross-country Summer OHV use will not be allowed without a permit. Summer OHV travel on BLM approved routes may be allowed where it is compatible with maintenance of caribou and Dall sheep habitat effectiveness. These approved routes will be determined through travel management planning.
- Winter motorized use in Dall sheep habitat would be monitored and, if use begins to approach a level which may result in altered distribution of Dall sheep, such use may be restricted in the future (through alteration of maintained trails or, if necessary, limited closures, e.g., limited areas and/or time periods).

Additional Management Prescriptions in Crucial Caribou and Dall Sheep Habitat for Activities Requiring a Permit from the BLM

Wild-7: Applicants proposing to conduct surface-disturbing activities or other intensive activities will, at the determination of the AO, be required to submit an approved plan (Caribou and Dall Sheep Impact Assessment and Mitigation Plan) describing methods to minimize impacts to caribou and Dall sheep and their habitat. This plan must describe the proposed project, the design and mitigation alternatives considered, the amount and quality of habitat to be affected, the mitigation and restoration to be applied, the residual impacts predicted, and the monitoring to be undertaken to confirm mitigation success.

Wild-8: Permanent roads will generally not be allowed, although long-term temporary roads may be, and roads will generally not be open to the public. Decisions subject to the ANILCA Title XI process in the Steese National Conservation Area will be made on a case-by-case basis pursuant to Title XI. Roads will be of the lowest practical profile. Road use may be restricted during caribou calving, postcalving, or Dall sheep lambing. Road construction will not be permitted if other means of access is practical (such as aircraft or winter ice-road). Facilities within crucial caribou and Dall sheep habitat that require year-round access will be located in forested areas where practical.

Wild-9: Permitted aircraft will follow a minimum flight level of 1,500 feet above ground level, except at landing and takeoff and when it would compromise safety. The AO may allow exceptions to these access requirements where impacts to caribou and Dall sheep are adequately minimized and where other resource considerations are of higher priority.

Wild-10: The footprint of facilities will be minimized. Permittees may be required to co-locate facilities and access to minimize habitat loss.

Wild-11: Reclamation and revegetation of disturbed areas will be required to meet performance standards set in site-specific reclamation plans with a goal of restoration of caribou and/or Dall sheep habitat, such as a required plant cover (percent) within a certain number of years before a performance bond is released.

Wild-12: Maintain health of Dall sheep by maintaining effective separation (WAFWA 2012) between Dall Sheep and domestic animals that pose a risk to Dall sheep health, including sheep, goats, llamas, alpacas, and other camelids.

- Domestic sheep, goats, and camelids (including alpaca and llama) are not allowed in Dall sheep habitat and adjacent lands. Boundaries for adjacent lands will be defined during development of travel management plans.
- Educate the public about the disease risks of using these types of pack animals within Dall sheep habitat.

Wild-13: Protect important wildlife habitats through special restrictions where necessary, including yearlong or seasonal activity restrictions and minimum altitudes for aircraft use (Appendix A, “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”).

Wild-14: Avoid or minimize impacts from projects that could degrade riparian areas and promote restoration of riparian areas to achieve Proper Functioning Condition.

Wild-15: Manage habitat for migratory birds to emphasize avoidance or minimization of negative impacts, and to restore and enhance habitat quality pursuant to Executive Order 13186, Migratory

Bird Treaty Act, and Memorandum of Understanding between BLM and USFWS to Promote Conservation of Migratory Birds (2010). Bird species of concern are listed in Table D-1, "Bird Species of Conservation Concern in the Eastern Interior Planning Area" and include: USFWS Bird Species of Conservation Concern, BLM Alaska Sensitive Species, Featured Species in the Alaska State Wildlife Conservation Strategy, and Boreal Partners in Flight Priority Species. Habitats that support several of these species, (including riparian and wetland habitats) will be given priority consideration in efforts to minimize impacts and restore habitat quality.

Wild-16: Minimize impacts to known nesting sites of priority raptors from actions authorized by the BLM. Priority raptor species are peregrine falcon, gyrfalcon, bald eagle and golden eagle. Specific standard operating procedures applicable to priority raptor habitats are listed in Appendix A. All priority raptor SOPs may be modified based on project-specific analyses. Nest sites of other raptors would be similarly managed, although management will generally be less restrictive and will be determined in site-specific environmental analyses.

Wild-17: Employ industry-accepted best management practices to prevent raptors and other birds from colliding with or being electrocuted by utility lines, alternative energy structures, towers, and poles (Appendix A, "Standard Operating Procedures and Fluid Mineral Leasing Stipulations").

Priority Wildlife Species and Habitats

Wild-18: Inventory and monitor priority wildlife species and their habitats within the planning area. Species listed in Table 6 and Table D-1 "Bird Species of Conservation Concern" will be a conservation priority.

Monitor populations of priority and subsistence wildlife species in cooperation with ADF&G and USFWS. Identify important habitats for priority species and monitor changes. Work towards development of adaptive management plans that will identify levels of change at which management actions will be implemented. Other important species and habitats include denning and seasonal high use areas for bears and furbearers, nesting habitats for other raptors, waterfowl, and shorebirds, and winter concentration areas for small game.

Table 6. Priority wildlife species and habitats in the Steese Planning Area

Priority Species	Seasonal Habitats Listed in Order of Priority
Caribou	Calving/post-calving (including mineral licks) Summer (including insect-relief habitat) Migration/movement routes Pre-calving Fall/winter
Dall sheep	Mineral licks (summer) Lambing Movement routes Summer Winter
Moose	Calving Mineral licks Late winter Rutting Riparian and willow shrub habitats
Peregrine falcon, gyrfalcon, bald eagle, golden eagle	Nesting Prey gathering
All special status species identified by the BLM State Director	Yearlong
Bird Species of Concern (Appendix D)	Yearlong

2.2.17 Forest and Woodland Products

Goals

Maintain and restore the health, productivity, and biological diversity of forest and woodland ecosystems.

Consistent with other resource values, provide personal use of wood and special forest products for local consumption and opportunities for commercial harvest.

Decisions

Forest-1: Allow harvest of dead or downed wood for recreational uses, including camping, on all lands.

Forest-2: Allow harvest of special forest products for personal use on all lands.

Forest-3: Consider personal use of timber, commercial use of forest products, and commercial timber salvage sales on all lands.

Forest-4: Consider commercial timber sales (non-salvage) on 741,000 acres.

Forest-5: Do not allow commercial timber sales (non-salvage) on 526,000 acres within the Birch Creek WSR Corridor, Mount Prindle RNA, Big Windy Hot Springs RNA, and crucial caribou and Dall sheep habitat.

Forest-6: In addition to requirements outlined in the SOPs (Appendix A), consider the following limitations in areas where timber harvest is authorized.

- Require winter harvest to minimize disturbances to soils and ground vegetation.

- Disperse slash generated from timber harvest activities.
- Set a maximum stump height for harvested trees.

2.2.18 Lands and Realty

2.2.18.1 Land Tenure

Goals

Retain public lands with high resource values. Adjust land to consolidate public land holdings, acquire lands with high public resource values, and meet public and community needs.

Acquire and maintain access to public lands, where needed, to improve management efficiency and facilitate multiple use and the public's enjoyment of these lands in coordination with other federal agencies, state and local governments, and private landowners.

Decisions

Lands-1: Those lands to be retained, acquired, or disposed of are identified as Zone 1, 2, or 3, in Appendix C "Land Tenure and Withdrawals". These decisions will have no effect on the ongoing land conveyance process or valid selections.

Lands in Zone 1 will be retained under BLM management. Inholdings will be considered for acquisition on a willing seller basis.

Lands in Zone 2 will generally be retained, but will be available for acquisition or disposal, whichever is appropriate to enhance public resource values, improve management capabilities, or reduce the potential for land use conflict.

Lands in Zone 3 are available for disposal. If needed, modify existing public land orders to allow for disposal.

Lands-2: Lands currently in Zones 2 and 3 will be reassigned to Zone 1 if they are included in future designations of critical habitat under the Endangered Species Act by the USFWS.

Zone 1 Lands (Lands Identified for Retention or Acquisition)

Lands-3: Retain lands within the Steese National Conservation Area in accordance with Section 402(b) of ANILCA; Retain Birch Creek WSR Corridor and Central Administrative Site (PLO 519) (Map).

Lands-4: Consider acquisition of private land inholdings from willing sellers within areas identified as Zone 1.

Lands-5: Consider acquisition of state inholdings within the proclaimed boundary of the Steese National Conservation Area, including approximately 15,000 acres of State lands (FM, T. 7N, R. 8E, and FM, T. 10N, R. 13E).

Lands-6: Consider acquisition of lands conveyed to the State between the southern boundary of the north Steese National Conservation Area and the Pinnell Mountain Trail (FM, T. 7N, R. 9E, T. 8N, R. 9E, and T. 8N, R. 10E).

Zone 2 Lands

Lands-7: Consider acquisition, or disposal, including exchange, of scattered parcels around Circle for the purposes of consolidation.

Zone 3 Lands (Lands Identified for Disposal)

Lands-8: If federal mining claims located outside of the Steese National Conservation Area and Birch Creek WSR Corridor become null and void, and are not conveyed to the State, consider these lands for disposal or exchange. If needed, modify existing public land orders to allow for disposal.

Rationale: With the ongoing conveyance of State- and Native-selections, the final landstatus in the planning area is uncertain. Once the conveyances are complete and the entitlements are fulfilled, there may be scattered parcels of BLM-managed lands that are impractical or uneconomical to manage. The zoning method described above would provide the flexibility to either dispose of or acquire land for the purposes of blocking up land patterns and reducing the number of scattered parcels of BLM-managed lands.

There are many “orphan” federal mining claims within the planning area that are surrounded by large blocks of State land as lands under valid federal mining claims cannot be conveyed. Most if not all, are State-selected lands for conveyance. If these claims become null and void after the State's entitlement is fulfilled (the BLM would not be able to convey additional land to the State) or if the State declines to take a parcel, the claims would meet BLM's disposal criteria of being impractical or uneconomical to manage.

Land Disposals

Lands-9: Use the authorities listed below to dispose of lands in Zones 2 and 3:

FLPMA Sales: Public lands located in Zones 2 or Zone 3 that meet one or more of the following criteria may be disposed of by FLPMA Sales (43 CFR 2710.0–3):

1. A tract acquired for a specific purpose that is no longer required for that or any other federal purpose.
2. A tract whose disposal would serve important public objectives, such as expansion of communities and economic development, that cannot be prudently or feasibly achieved on other than public lands, and that outweighs other public objectives and values. Examples of those other public objectives and values, which would normally be used as justification to maintain such a tract in federal management, include (but are not limited) to recreation and scenic values.
3. A tract of land which, because of its location or other characteristics, is difficult and uneconomical to manage as part of the public lands, and is not suitable for management by another federal department or agency.

Lands identified for disposal under this authority that are State- or Native-selected would have to be adjudicated before the BLM will entertain a sale. If these lands become unencumbered during the life of the plan, they will then be suitable for disposal under this authority and have been properly identified through the planning process.

Lands-10: Lands not to be disposed of include:

1. Lands withdrawn from the public land laws or segregated by State- or Native-selection. Disposal can occur once the segregation is removed or if the withdrawal is modified or revoked.
2. Lands located within valid mining claims or that are of record under Section 314 of FLPMA will not be disposed of unless BLM policy is changed in the future to allow for their disposal. Lands with federal mining claims that become null and void may be disposed of.
3. Lands identified as land tenure Zone 1.

Lands-11: Reserved federal interests in split-estate lands anywhere in the planning area may be considered for conveyance out of federal management.

Lands-12: *Recreation and Public Purposes Act (R&PP) (43 U.S.C. 869 et seq.):* R&PP disposal would be considered on Zone 2 and 3 lands throughout the planning area in accordance with the following:

1. Lands identified for disposal under the Recreation and Public Purposes Act (R&PP) that are selected by either the State of Alaska or a Native corporation would have to be fully adjudicated before the BLM will entertain a sale. If these lands become unencumbered within the life of the plan, then they would be suitable for disposal under this authority.

2. In most instances, the BLM would first lease lands under this Act and only convey the lands after the project is constructed in compliance with an approved development and management plan. Tracts proposed as sanitary landfills will always be sold; they will not be leased.

3. Any lands conveyed under this act which are being used for solid waste disposal (sanitary landfill) or for any other purpose that the Authorized Officer determines may include the disposal, placement, or release of any hazardous substance (such as wastewater treatment facility, shooting range, firefighter training facility) will be conveyed with a limited reversion clause. The limited reversion clause will prohibit reversion to the federal government of any portion of the land if such portion has been used for solid waste disposal or for any other purpose that the Authorized Officer determines may include the disposal, placement, or release of any hazardous substance. With regard to such sites all provisions of 43 CFR 2743 shall be followed.

Lands-13: *Airport and Airway Improvement Act of September 3, 1982 (49 U.S.C. 2215):* Process airport conveyances as requested by the Federal Aviation Administration. Each conveyance will contain appropriate covenants and reservation(s) requested by Federal Aviation Administration. As a condition to each conveyance, the property interest conveyed will revert to the federal government in the event the lands are not developed for airport or airway purposes or are used in a manner inconsistent with the terms of the conveyance.

Lands-14: *Exchanges:* Consider mutually benefiting public interest land exchanges. Exchanges are authorized in Alaska by FLPMA (43 U.S.C. 1716), Section 22(f) of ANCSA, and Section 402(b) of ANILCA. When considering public interest, full consideration will be given to efficient management of public lands and to securing resource management objectives. Exchanges will not be actively sought out until State and Native entitlements are fulfilled.

Land Acquisitions

Lands-15: When and where appropriate, lands may be acquired by purchase, exchange, or donation, from willing owners/sellers, to further the programs of the Secretary of the Interior. The BLM may acquire less than fee title to property if management goals can be achieved by doing so (43 CFR 2100 and BLM Acquisition Handbook H-2100-1). Acquisition of a conservation easement is an example of acquiring less than fee title.

Consider acquisition of land from willing sellers in Zone 1 areas (inholdings) and in Zone 2 areas for consolidation of land patterns (Map 7).

2.2.18.2 Land Use Authorizations

Goals

Meet public needs for land use authorizations (such as rights-of-way, leases, and permits) while minimizing adverse impacts to other resource values.

Prevent, control, and eliminate unauthorized use (trespass) on BLM-managed lands.

Decisions

Lands-16: Consider FLPMA leases throughout the planning area, except where prohibited by law or public land order.

Lands-17: All FLPMA leases will be at fair market value. Cabins or permanent structures used for private recreation may not be authorized. Proposals for commercial use leases of cabins (such as guiding or trapping) will be considered.

Lands-18: R&PP leases will not be used for the purpose of authorizing solid waste disposal sites (sanitary landfills) or for any other purpose that the Authorized Officer determines may include the disposal, placement, or release of any hazardous substance (such as wastewater treatment facility, shooting range, firefighter training facility). Existing leases for solid waste disposal sites or other uses which the Authorized Officer determines may include the disposal, placement, or release of any hazardous substance will be converted to patents without a reversionary clause. R&PP lease proposals on selected land must include a letter of non-objection from the selecting entity. R&PP leases and disposal will be considered on Zone 2 and 3 lands.

Permits

Lands-19: Permits are used to authorize short-term occupancy, use, or development of a site under Section 302 of FLPMA (43 CFR 2920) or under ANILCA. Consider land use permits throughout the planning area with the following limitations:

1. Cabin or permanent structure permits are not issued for private recreation uses.

2. Cabins and other structures for commercial trapping will be authorized by short term (three year maximum) Section 302 permits renewable at the discretion of the Authorized Officer. The applicant must provide proof of substantial commercial trapping activity.

3. Authorization of structures within the Steese National Conservation Area and Birch Creek WSR Corridor will be issued in accordance with Sections 1310, 1303(b) and 1316 of ANILCA.

4. Permit authorizations on all other BLM-managed lands will be considered pursuant to Section 302 of FLPMA.

5. Military maneuver permits will be considered except in Birch Creek corridor and the Steese National Conservation Area (Public Law 100-586).

6. Permits for administrative use of BLM-managed lands by the State of Alaska will be considered throughout the planning area.

Unauthorized Use

Lands-20: Address and resolve unauthorized use and/or unauthorized occupancy of the public lands (Trespass) in accordance with the regulations found in 43 CFR 9220.1-2 and the guidance provided by BLM's Realty Trespass Abatement Handbook H-9232-1.

Lands-21: Trespass cabins may become the property of the U.S. Government and be managed as administrative sites, emergency shelters or public use cabins (BLM 1989b). Possible management actions on trespass cabins include:

1. Authorization by lease or permit for legitimate uses, if consistent with goals and objectives for the area.
2. Relinquishment to the U.S. for management purposes.
3. Removal of the structure.

Rights-of-Way

Lands-22: Consider Rights-of-way throughout the planning area. There are no right-of-way exclusion or avoidances areas. No transportation corridors are designated.

Lands-23: Locate Rights-of-way (ROWs) near other rights-of-way or on already disturbed areas whenever practical and reasonable to do so.

Lands-24: Rights-of-way located within the Steese National Conservation Area, and Birch Creek Wild and Scenic River, must be consistent with purposes for which the areas were designated.

Lands-25: Notwithstanding any decision in this plan and in accordance with ANILCA Title XI, rights-of-way for Transportation or Utility Systems will be considered throughout the Conservation Systems Units and Steese National Conservation Area. Approval or disapproval of these rights-of-way will be consistent with the provisions of ANILCA Title XI and regulations found at 43 CFR 36. Rights-of-way authorizations on all other BLM-managed lands will be considered, and authorized under Title V of FLPMA in accordance with the regulations found in 43 CFR 2808.

Lands-26: Provide access to non-federally owned lands adequate to secure the owner the reasonable use and enjoyment of such lands as required by section 1323(b) of ANILCA.

Lands-27: Consider additional communication site development on public land to support resource development and ancillary needs. Consider communication site rights-of-way throughout the planning area. Ensure coordination between existing and potential communication site users, and maximum utilization of existing sites (43 CFR 2800).

Implementation Level Decisions

Authorizations for Use of State- or Native-selected Land

Native-selected: Prior to issuance of a use authorization, the views of the concerned Native region(s) or village(s) will be obtained and considered consistent with 43 CFR 2650.1. If the corporation objects to the proposal, the BLM may proceed with authorization only if the State Director determines that the proposal is deemed to be in the public's best interest. Monies received for any use authorization on Native-selected lands would go into an escrow account.

State-selected: In accordance with Section 906(k) of ANILCA, BLM must receive a letter of concurrence prior to issuance of any use authorization on State selected lands. BLM may then incorporate State-recommended terms and condition of the use authorization, if in compliance with federal laws and regulations. If the State objects, BLM would not issue the use authorization.

2.2.18.3 Renewable Energy

Goal

Encourage the development of renewable energy sources consistent with other decisions in this plan and with the Energy Policy Act of 2005 and the BLM Energy and Mineral Policy (August 26, 2008).

Decisions

Lands-28: Consider applications for wind energy, solar energy and biomass utilization activities. Small-scale renewable energy facilities used to provide energy to isolated locations will be considered throughout the planning area. Wind energy, solar energy, and biomass utilization activities will be authorized under the appropriate land use authorization (lease, right-of-way, or permit).

Lands-29: The following National Conservation Lands are not available for large-scale wind energy site testing, monitoring, and development: Birch Creek WSR Corridor and the Steese National Conservation Area. Should a Title XI application be received for large-scale wind energy projects in these areas, BLM will consider alternative locations consistent with the Title XI process.

Notwithstanding any decision in this plan and in accordance with ANILCA Title XI, rights-of-way for Transportation or Utility Systems will be considered throughout the National Wild and Scenic Rivers System and Steese National Conservation Area including NLCS units excluded from wind energy uses. Any approval or disapproval of these rights-of-way will be consistent with the provisions of ANILCA.

Small-scale renewable energy facilities will be considered in these areas if consistent with protecting the values for which the areas were designated. Small-scale facilities considered could include projects that provide energy to: BLM administrative sites, BLM recreation sites, private land inholdings, mine sites, and small communities (less than 250 residents). These projects would consist of a few solar panels, a wood-fired boiler, or a few wind turbines and would not affect more than 100 acres per NLCS unit over the life of the RMP.

Rationale: BLM's Land Use Planning Handbook (BLM 2005a) requires the identification of existing and potential development areas for renewable energy projects (e.g., wind, solar, and biomass) consistent with the goals and objectives for natural resources in the planning area. The

BLM describes criteria that must be met for economically feasible utility-scale solar, wind and biomass development in Assessing the Potential for Renewable Energy on Public Lands (BLM and DOE 2003). Although Alaska was not included in this report, we applied the criteria to lands in the planning area and determined that no lands met the criteria outlined in the assessment.

The primary criterion for commercial solar operations is a solar resource of at least 5 kWh/m2/day. This criteria is not met anywhere within the planning area (DOE 2008a and 2008b). Primary criteria for commercial biomass projects included a biomass power plant and a population center with a skilled labor force within 50 miles of the source of the biomass. These criteria cannot be met on BLM-managed lands in the planning area.

Primary criteria for utility-scale wind development include a wind power class 4 and above for short-term, and class 3 and above for long-term; transmission access within 25 miles; and road access within 50 miles. Within the planning area, wind potential on BLM-managed lands is generally poor to fair (Class 1–3). There are limited areas of Class 4–7 wind resources in the White Mountains NRA and Steese National Conservation Area (DOE 2006, wind energy map). However, most BLM lands are not within 25 miles of a major transmission line. Large-scale wind farms are connected to the electric power transmission network; small-scale facilities are used to provide electricity to isolated locations. It is unlikely that there would be any large-scale wind farms in the planning area. It is possible, however, that some small-scale facilities may be developed for BLM administrative use, or that the BLM may authorize small-scale facilities to promote energy to rural areas.

Geothermal leasing falls under the regulations for fluid leasable minerals and is addressed under section 2.2.1.8 Fluid Leasable Minerals.

2.2.18.4 Withdrawals

Goal

Where the BLM determines withdrawals from the public lands laws are not necessary, those lands would be open to the public land laws.

Decisions

Lands-30: Do not recommend to the Secretary of the Interior revocation of the ANILCA section 402(b) withdrawal in the Steese National Conservation Area, thus keeping this area withdrawn from location, entry, and patent under the U.S. mining laws.

Lands-31: Recommend to the Secretary of the Interior that ANCSA 17(d)(1) withdrawals within the Steese National Conservation Area be partially revoked to remove duplicate withdrawals.

Lands-32: Recommend to the Secretary of the Interior that new withdrawals under the authority of FLPMA be established on 24,000 acres in the following areas for the purposes of protecting sensitive resources, and that existing ANCSA 17(d)(1) withdrawals be partially revoked for the respective areas upon establishment of new FLPMA withdrawals. Recommended new withdrawals under FLPMA would only withdraw lands from locatable mineral entry and location. These withdrawals would not affect conveyance of validly selected lands. (Appendix C)

1. Approximately 17,000 acres on upper and lower Birch Creek including all lands that are within the Birch Creek WSR Corridor, but outside of the one-half mile withdrawn by the

Wild and Scenic Rivers Act pursuant to ANILCA and areas of lower Birch Creek outside the WSR Corridor.

2. Approximately 6,000 acres within riparian conservation areas.

3. Approximately 1,000 acres on parcels adjacent to the Steese National Conservation Area that are within the Steese Special Recreation Management Area.

Lands-33: Recommend to the Secretary of the Interior that ANCSA 17(d)(1) withdrawals be partially revoked to open approximately 28,000 acres outside the Steese National Conservation Area to locatable mineral entry and mineral leasing laws in the areas shown on Map 9.

Lands-34: In areas this RMP recommends as remaining withdrawn from locatable mineral entry and where a withdrawal under ANILCA does not exist, do not recommend to the Secretary of the Interior revocation of the ANCSA 17(d)(1) withdrawals until such time that a new withdrawal under the authority of FLPMA is established for the purposes of protecting sensitive resources.

Lands-35: Recommend to the Secretary of the Interior to modify or partially revoke ANCSA 17(d)(1) withdrawals to open isolated federal mining claims (federal mining claims surrounded by State land that cannot be conveyed) located outside of the Steese National Conservation Area, Birch Creek Wild and Scenic River Corridor, crucial caribou and Dall sheep habitats, and riparian conservation areas to mineral location and entry.

Lands-36: Recommend retaining federal agency withdrawals (e.g., NOAA, military, GSA, FAA) until no longer required by the agency. Regulations in 43 CFR 2370 and following will govern the process for an agency to relinquish lands or interest in lands, in whole or in part, when no longer needed. Once an agency has filed a completed notice of intent to relinquish to the BLM and appropriate General Services Administration (GSA) regional office the BLM will follow the appropriate regulations and the Authorized Officer will make a determination as to suitability of the lands or interest in lands for return to the public domain. If the lands or interest in lands are determined suitable for return to the public domain the Authorized Officer will notify the holding agency that the Department of the Interior accepts accountability and responsibility for the property in accordance with procedures found in 43 CFR 2374. If the lands or interest in lands are determined to be unsuitable for return to the public domain the Authorized Officer will request concurrence from the appropriate officer of the GSA and upon receipt of the concurrence will notify the holding agency to report as excess property the lands and improvements or interest in lands to the General Service Administration in accordance with procedures found in 43 CFR 2374. (Table 3.36, “Existing Withdrawals to Other Agencies in the Planning Area” Eastern Interior Proposed RMP/Final EIS).

2.2.19 Minerals

2.2.19.1 Fluid Leasable Minerals

Goals

The public lands and federal mineral estate would be made available for orderly and efficient exploration, development and production of fluid leasable mineral resources (includes oil, natural gas, tar sands, coal bed natural gas, and geothermal steam), unless withdrawal or other administrative action is justified in the national interest.

When authorizing fluid leasable minerals actions, to the extent possible, ensure that goals to protect other resource values in the planning area are met.

Decisions

FL Min-1: Close approximately 1,237,000 acres in the Steese National Conservation Area, Birch Creek WSR, and riparian conservation areas to fluid leasable minerals (Map 9):

FL Min-2: Open all remaining lands, approximately 30,000 acres, to leasing, subject to Standard Lease Terms, Fluid Mineral Leasing Stipulations, and Standard Operating Procedures (Appendix A). Fluid mineral (oil and gas, geothermal and coal bed natural gas) leasing and development will be considered in areas open to leasing, subject to additional NEPA analysis. Partial revocation of ANCSA 17(d)(1) withdrawals is required to open these lands to leasing. See also section 2.2.18.4 “Withdrawals”.

FL Min-3: In split-estate situations, requirements in Appendix A prescribed for federal mineral development apply only to the development of federal subsurface minerals because the BLM does not have authority over surface management requirements.

FL Min-4: All open areas are also open to geophysical exploration. Areas closed to fluid mineral leasing may be considered for geophysical exploration. Geophysical exploration activities are subject to SOPs (Appendix A).

2.2.19.2 Solid Leasable Minerals

Goals

The public lands and federal mineral estate will be made available for orderly and efficient exploration, development, and production of solid leasable mineral resources and non-energy leasable minerals, unless withdrawal is justified in the national interest.

When authorizing solid leasable minerals actions, to the extent possible, ensure that goals to protect other resource values in the planning area are met.

Decisions

SL Min-1: Close approximately 1,237,000 acres in the Steese National Conservation Area, Birch Creek WSR, and riparian conservation areas to solid leasable minerals, including coal (Map 9).

SL Min-2: Open approximately 30,000 acres to solid leasable minerals subject to BLM Lease Terms and SOPs (Appendix A “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”). and 43 CFR 3500. Partial revocation of ANCSA 17(d)(1) withdrawals required to open these lands to leasing. See also section 2.2.18.4 “Withdrawals”.

SL Min-3: All areas open to solid mineral leasing are open to coal resource inventory and exploration. Areas closed to solid mineral leasing may be considered for coal inventory and exploration.

SL Min-4: Defer a decision on Coal leasing because the coal screening process (as identified by 43 CFR 3420.1-4) has not been completed in the planning area. If an application for a coal lease is received, the appropriate land use and environmental analysis, including the coal screening process, would be conducted to determine whether or not the coal areas are acceptable for further consideration for leasing and development under 43 CFR 3420.1-4. An RMP amendment will be

needed before coal leasing could occur. Only those BLM-managed public lands that have development potential may be identified as acceptable for further consideration for coal leasing.

If this RMP is amended to allow for coal leasing, develop an agreement between the State of Alaska and the Office of Surface Mining defining the regulatory role of the State in accordance with 30 CFR 745.

SL Min-5: Oil shale could be leased in areas that are open to fluid mineral leasing; areas closed to fluid mineral leasing are also closed to oil shale leasing. The Energy Policy Act of 2005 authorizes the Secretary of the Interior to conduct lease sales in states that show an interest. Leasing is unlikely, as there are no known occurrences of oil shale on BLM lands in the planning area.

SL Min-6: In split-estate situations, the SOPs (Appendix A, "Standard Operating Procedures and Fluid Mineral Leasing Stipulations") apply only to the development of the federal subsurface minerals. The BLM does not have authority over surface management requirements.

2.2.19.3 Locatable Minerals

Goal

Maintain or enhance opportunities for mineral exploration and development, while maintaining other resource values.

Decisions

L Min-1: The Steese National Conservation Area and Birch Creek WSR are withdrawn from mineral entry pursuant to ANILCA. Recommend to the Secretary of the Interior approximately 24,800 acres in riparian conservation areas and the Steese SRMA, which are outside of existing ANILCA withdrawals for the Steese National Conservation Area and Birch Creek WSR, be withdrawn from locatable mineral entry (Maps 8 and 9). See also section 2.2.18.4 "Withdrawals" and Appendix C.2, "Withdrawals".

L Min-2: Recommend to the Secretary of the Interior that approximately 30,000 acres be opened to locatable mineral entry (Maps 8 and 9). Partial revocation of ANCSA 17(d)(1) withdrawals required to open these lands to mining. See section 2.2.18.4 "Withdrawals".

L Min-3: Mining of locatable minerals will be subject to the surface management regulations found in 43 CFR 3809, the SOPs (Appendix A "Standard Operating Procedures and Fluid Mineral Leasing Stipulations"), and other decisions in this Approved RMP. Surface occupancy under the mining laws is subject to regulations contained in 43 CFR 3715. Bonding is required in accordance with BLM's policy.

L Min-4: Mining-related disturbances will be rehabilitated, on active and inactive workings, as required by 43 CFR 3809 and in accordance with SOPs and BLM's policy.

L Min-5: All operations require the filing of a Plan of Operations or Notice of Operations with the BLM (43 CFR 3809). Plans of Operation must be approved prior to commencement of on-the-ground activities. SOPs (Appendix A, "Standard Operating Procedures and Fluid Mineral Leasing Stipulations") will be utilized to minimize surface impacts and to facilitate rehabilitation and revegetation of mined areas.

L Min-6: Isolated federal mining claims located outside of the Steese National Conservation Area, Birch Creek wild and scenic river corridor, and riparian conservation areas are recommended open to locatable minerals.

2.2.19.4 Salable Minerals

Goals

Make lands, including federally administered surface/minerals and split-estate, available for mineral material disposal.

When authorizing salable minerals actions, to the extent possible, ensure that goals to protect other resource values in the planning area are met.

Decisions

Min Mat-1: Close approximately 69,000 acres in the Birch Creek WSR Corridor to salable minerals.

Min Mat-2: Open all remaining lands in the Steese Planning Area (1,198,000 acres) to salable minerals.

Min Mat-3: Mining of salable material will be subject to the Mineral Materials Disposal regulations found in 43 CFR 3600. Bonding is required in accordance with BLM contract regulations.

Min Mat-4: Mineral material sales on selected lands require concurrence of the potential, future landowner, and proceeds from the sale placed into escrow.

Min Mat-5: Free Use Permits will not be issued for resources on selected lands.

Min Mat-6: Material sales on un-certificated Native allotments will not be permitted (43 CFR 3601.12(b)). Material sales on certificated Native allotments are the purview of the Bureau of Indian Affairs and its successor agency.

Min Mat-7: Material sales on split-estate require concurrence of the surface owner.

Min Mat-8: Mineral materials sales are not permitted on pre-1955 mining claims (Public Law 167) and are subject to non-interference with the mining operation on post-1955 mining claims.

Table 7. Summary of Mineral decisions for the Steese Planning Area

Type of Mineral	Decision	Location	Acres
Fluid Leasable	Open subject to standard stipulations, Fluid Mineral Leasing Stipulations, and SOPs; Open via partial revocation of ANCSA 17(d)(1) withdrawals	Near Circle, Alaska	30,000
Fluid Leasable	Closed	Steese National Conservation Area, Birch Creek WSR, riparian conservation areas, Steese Recreation Management Area	1,237,000
Solid Leasable	Open via partial revocation of ANCSA 17(d)(1) withdrawals	Near Circle, Alaska	30,000
Solid Leasable	Closed	Steese National Conservation Area, Birch Creek WSR, riparian conservation areas, Steese Recreation Management Area	1,237,000
Locatable	Recommended Open via partial revocation of ANCSA 17(d)(1) withdrawals	Near Circle, Alaska	30,000
Locatable	Recommended Withdrawn; currently withdrawn via ANILCA or ANCSA 17(d)(1) withdrawals; retain ANILCA and replace ANCSA 17(d)(1) with FLPMA withdrawals where no ANILCA withdrawals exist.	Steese National Conservation Area, Birch Creek WSR, riparian conservation areas, Steese Recreation Management Area	1,237,000
Salable	Closed	Birch Creek WSR	69,000
Salable	Open	Remainder of planning area	1,198,000

2.2.20 Recreation

Goal

Provide for multiple recreational uses of the public lands. This includes facilitating a wide range of beneficial outcomes by managing for desired recreational activities, settings and experiences. This helps support local economic stability, while sustaining recreation resources and other sensitive resource values.

Land Use Plan Decisions

Follow BLM program direction for managing recreation on public lands by incorporating “The BLM’s Priorities for Recreation and Visitor Services” (BLM 2003), BLM Manual 8320 Planning for Recreation and Visitor Services (BLM 2011), applicable sections of Appendix C of the Land Use Planning Handbook, and other BLM directives that are related to recreation management.

Land Use Planning decisions for Recreation and Visitor Services include:

- Designation of recreation management areas (RMAs)
- Establishment of recreation and visitor service objectives for each RMA

- Identification of land use planning level supporting management actions and allowable use decisions for each RMA.
- Limitation of target shooting prohibiting recreational shooting within one-quarter mile of developed recreational facilities. This includes (but is not limited to) campgrounds, cabins, waysides, trailheads, and administrative sites.
- Limitation of target shooting prohibiting recreational shooting on, from, or across the drivable surface of any trail, travel route, or travel way.

Management Actions

Rec-1: Designate 1,246,000 acres of lands including the Steese National Conservation Area, the Birch Creek WSR Corridor and lands adjacent to the WSR corridor and the conservation area as the Steese Special Recreation Management Area (SRMA) and manage each recreation management zone (RMZ) to protect and enhance the activities, experiences, benefits and desired recreational setting characteristics described in Tables 12 through 29 below (Map 11).

If BLM acquires state inholdings within the Steese National Conservation Area, manage it as part of the Steese SRMA.

Rec-2: Manage SRMAs/RMZs for measurable outcome-focused objectives, as shown in Tables 12 through 29. Supporting management actions and allowable use decisions are required to 1) sustain or enhance recreation objectives, 2) protect the desired recreation setting characteristics, and 3) constrain uses, including non-compatible recreation activities that are detrimental to meeting recreation or other critical recourse objectives.

Rec-3: Develop a recreation area management plan for the Steese SRMA which includes monitoring and evaluation of visitor satisfaction, niche decisions, targeted outcomes, and setting character decisions, based on recreation management zone (RMZ) objectives and prescriptions (Tables 12 through 29 below).

Rec-4: On public lands that are not designated as a SRMA, manage to meet basic recreation, visitor services, and resource stewardship needs. Address emerging recreation issues as needed. Prioritize actions for remediating recreation issues.

Rec-5: Issue special recreation permits on a case-by-case basis when consistent with other resource uses and restrictions.

Implementation Level Decisions

Rec-6: Support events that emphasize collaborative outreach and public awareness to promote public stewardship, such as National Public Lands Day or National Trails Day. Utilize volunteer participation and recruit and train volunteers to provide effective visitor contact assistance.

Rec-7: Establish and maintain information kiosks with site maps, brochures, interpretive and educational information, important contacts, and site regulations. Develop and maintain a website of BLM recreation sites and areas that provide access information and available opportunities.

Rec-8: Establish comparable, cost-effective, and value-based fee systems for services and facilities provided to public users in accordance with BLM directives and the Federal Lands Recreation Enhancement Act within SRMAs.

Rec-9: Conduct periodic accessibility, safety, and condition assessments at developed recreation sites, and resolve deferred and corrective maintenance needs.

Rec-10: Establish, maintain and/or expand partnership agreements that are mutually beneficial to the BLM and to the public to enhance comprehensive planning, collaborative management, and funding.

Rec-11: BLM policy is to allow the safe use of public lands for recreational activities including the use of firearms for hunting and shooting sports, and trapping. Dispersed recreational use for trapping and shooting in a safe manner will be allowed, except as follows:

1. Trapping and placement of bait and wildlife lures (scents) is prohibited within one-quarter mile of any developed sites. This includes, but is not limited to: campgrounds, cabins, waysides, trailheads, and administrative sites without authorization. Trapping includes, but is not limited to, the use of marten pole sets, snares, conibear, or leg hold traps.
2. No one may set up a bear bait station within one-quarter mile of any publicly maintained road or trail.

Rec-12: Tables 8, 9, and 10 define the desired Recreation Setting Character Matrix that applies to the planning area. Recreational Setting Characteristics (RSC) are descriptive conditions describing management parameters.

Table 8. Matrix of recreation setting classifications and character of the natural landscape for physical characteristics (resources and facilities)

Character of Resources and Facilities	Primitive Classification	Semi-Primitive Classification	Backcountry Classification	Middlecountry Classification	Frontcountry Classification	Rural Classification
Remoteness	Managed for an extremely high probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge, and risk.	Managed for a very high probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge, and risk.	Managed for a high probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge, and risk.	Managed for a moderate probability of experiencing solitude, closeness to nature, and tranquility. Managed for a moderate degree of challenge and risk associated with the use of motorized equipment.	Managed for the opportunity to affiliate with other users in developed sites but with some chance for privacy. Little challenge and risk. On or near improved trails or roads.	Managed for the opportunity to observe and affiliate with other users in areas where convenience of facilities is important. On or near primary highways, but still within a rural area.
Naturalness	Protect an undisturbed or rehabilitated naturally-appearing landscape.	Provide a naturally-appearing landscape with a low level of modifications noticeable.	Provide a predominately naturally-appearing landscape with a low level of modifications noticeable, none of which dominate the natural landscape features.	Provide for a generally natural landscape partially modified by roads, pipelines, etc., with usually none dominating natural landscape features.	Provide for a relatively natural landscape partially modified by roads, pipelines, etc., which may dominate natural landscape features.	Provide for a landscape substantially modified by structures and roads that usually dominate natural landscape features.
Visitor Facilities	Maintain minimal rustic and rudimentary facilities that are constructed for site protection using natural materials and are designed to blend with the surrounding landscape.	Maintain rustic and rudimentary facilities that are generally constructed using natural materials, and are designed to blend with the surrounding landscape.	Maintain some naturally appearing trails and facilities, such as cabins, bridges and signs for user convenience, which usually blend with the surrounding landscape.	Maintain marked trails with associated trailheads and facilities including cabins, toilets, parking areas and garbage collection, which generally blend with the surrounding landscape.	Maintain improved yet modest facilities such as campgrounds, toilets, trails, and interpretive signs, which could attract attention.	Maintain modern facilities such as developed campgrounds, group shelters, and exhibits, which generally attract attention.

Table 9. Matrix of recreation setting classifications and character of the social environment (visitor use and users)

Character of Social Environment	Primitive Classification	Semi-Primitive Classification	Backcountry Classification	Middlecountry Classification	Frontcountry Classification	Rural Classification
Contacts (with other group)	Average number of contacts per day usually fewer than three groups.	Average number contacts per day usually fewer than four groups.	Average number contacts per day usually fewer than seven groups.	Average number contacts per day usually fewer than 10 groups.	People are generally visible at campsites, but are usually distant enough to prevent interactions.	People seem to be prevalent, but human contact is still intermittent.
Group Size	Manage for a majority of group sizes that usually average fewer than three people per group.	Manage for a majority of group sizes that usually average fewer than four people per group.	Manage for a majority of group sizes that usually average fewer than seven people per group.	Manage for a majority of group sizes that usually average fewer than 10 people per group.	Manage for a majority of group sizes that usually average fewer than 12 people per group.	Manage for a majority of group sizes that usually average fewer than 15 people per group.
Evidence of Use	Only footprints are typically observed.	Footprints plus slight vegetation trampling at campsites and on travel routes. Winter snow trails and/or tracks may be present.	Winter snow trails and/or tracks may be present, but generally blend with the surrounding landscape. OHV routes may be present.	Some landscape alternations are present but generally repeat the basic elements of the surrounding landscape. Surface vegetation may show wear with some bare soils.	Landscape alterations are generally present and may attract attention. Well-worn soils and vegetation may be present. Travel routes often gravel surfaced for erosion control.	Landscape alterations are present and attract attention. Improved routes protect soils and vegetation, but noise, litter, and facility impacts are possible.

Table 10. Matrix of recreation setting classifications and character of the operational environment (administrative and service setting)

Character of Operational Environment	Primitive Classification	Semi-Primitive Classification	Backcountry Classification	Middlecountry Classification	Frontcountry Classification	Rural Classification
Motorized Use	No trails or trailheads managed for motorized activities. Snowmobile and other means of surface transportation, motorboat, and aircraft activity permissible through ANILCA 1110(a) and 811. Restrictions may apply in Research Natural Areas.	No trails or trailheads managed for motorized activities. Snowmobile and other means of surface transportation, motorboat, and aircraft activity permissible through ANILCA 1110(a) and 811.	Various forms of use may be present but not substantially noticeable. Winter trails maintained for snowmobile use.	Four-wheel drives, all-terrain vehicles, motorboats, snowmobiles and aircraft uses are common, in addition to non-motorized use.	Two-wheel drive vehicle use is predominate on developed roads and highways, encounters will be regular. Trails and trailheads managed to accommodate summer and winter OHV use.	Car and truck traffic is characteristic and will be encountered on a regular basis. Trails and trailheads managed to accommodate summer and winter OHV use.
Management Controls	No visitor controls apparent. Enforcement presence very rare.	Signs at key access points on basic user ethics. Use restrictions may be present. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions are usually in place. Random enforcement presence.	Moderate regulatory signing. Motorized and mechanized use restrictions are usually in place. Periodic enforcement presence.	Rules clearly posted with common seasonal or weight/type of OHV use restrictions. Routine enforcement presence.	Regulations prominent. Total use can be limited by permit, reservation, etc., Significant enforcement presence may exist.
Visitor Services	None are typically available on-site.	Basic maps and area personnel are rarely available to provide on-site assistance.	Basic maps and area personnel are occasionally available to provide on-site assistance.	Area brochures and maps, plus area personnel are periodically present to provide on-site assistance. May have information and interpretation available.	Information materials describe recreation areas and activities. Area personnel are sometimes available.	Everything described to the left in this row, plus area personnel perform informal on-site education.

Table 11. Steese Planning Area recreation management zones, recreation setting character, and off-highway vehicle designations

Name of Recreation Management Zone (RMZ)	Acres	Recreation Setting Character	Off-highway Vehicle Area Designation
Birch Creek RMZ	100,000	Semi-Primitive	Limited
Pinnell Mountain Trail RMZ	16,000	Semi-Primitive	Limited
Mount Prindle RNA RMZ	3,000	Primitive	Limited
Big Windy RNA RMZ	160	Primitive	Limited
Preacher Creek RMZ	488,000	Backcountry	Limited
Harrison Creek RMZ	114,000	Frontcountry	Limited
Wolf Creek RMZ	405,000	Semi-Primitive	Limited
Clums RMZ	89,000	Middlecountry	Limited
Bachelor Creek RMZ	31,000	Middlecountry	Limited
Other BLM lands	36,000	N/A	Limited

Recreation Management Zones

The following tables outline management decisions and objectives for the nine RMZs in the Steese Special Recreation Management Area. These are displayed on Map 11.

Steese SRMA - RMZ 1 – Birch Creek RMZ

Recreation management zone description: The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a semi-primitive Interior Alaska river setting, on one of America's nationally designated wild rivers.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 12 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Semi-Primitive. See Tables 8, 9, and 10 for a description of semi-primitive.

Table 12. Primary targeted experience and benefit outcomes in the Birch Creek Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Float boating, river camping
Experiences	**Primary:** Escaping crowds; experiencing solitude; experiencing adventure; enjoying the sights, sounds, and smells of nature Secondary: Testing your abilities
Benefits	**Personal:** More exercise-oriented lifestyle; Greater connection with nature; Greater sense of adventure; Enhanced sense of competence **Community/Social:** Greater awareness of minimal impact recreation; Greater opportunities for youth **Environmental:** Heightened awareness of the natural world; Greater protection of fish and wildlife habitat **Economic:** Increased local tourism revenue

Table 13. Implementation framework decision for Birch Creek Recreation Management Zone

Implementation Actions	Description
Management	The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized float-boating and river camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.
Information and Education	Provide outreach to national, state and local float-boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Semi Primitive recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED. Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 2 – Pinnell Mountain RMZ

Recreation management zone description: The focus this zone would be to provide high quality, backpacking (multi-day) and hiking (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting, on one of America's National Recreation Trails.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 14 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Primitive. See Table 8 for a description of Semi-Primitive.

Table 14. Primary targeted experience and benefit outcomes in the Pinnell Mountain Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Backpacking; Hiking/walking
Experiences	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exercise/physical fitness
Benefits	**Personal:** Improved outlook on life; Improved physical fitness; Improved mental health; Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater awareness of minimal impact recreation; Greater opportunities for youth **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue

Table 15. Implementation framework decision for the Pinnell Mountain Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for non-motorized backpacking and hiking opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.
Information and Education	Provide outreach to recreationists seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 3 – Mount Prindle Research Natural Area RMZ

Recreation management zone description: The focus this zone would be to provide high quality, climbing, hunting and research opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 16 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Primitive. See Table 8 for a description of Primitive.

Table 16. Primary targeted experience and benefit outcomes in the Mount Prindle Research Natural Area Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Climbing; Hunting; Nature study (research)
Experiences	**Primary:** Competence testing; Escaping crowds; Experiencing nature
Benefits	**Personal:** Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Positive economic contributions to communities **Environmental:** Heightened awareness of the natural world; Greater protection of distinctive natural landscapes **Economic:** Increased local tourism revenue

Table 17. Implementation framework decision for the Mount Prindle Research Natural Area Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized climbing, hunting and research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, providing minimal facility development and visitor services, providing infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.
Information and Education	Provide outreach to researchers, and recreationists seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 4 – Big Windy Research Natural Area RMZ

Recreation management zone description: The focus this zone would be to provide high quality research opportunities for users who desire an experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting containing an undeveloped hot springs system, uncommon and isolated plant species, and delicate geologic structures.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 18 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Primitive. See Table 8 for a description of semi-primitive.

Table 18. Primary targeted experience and benefit outcomes in the Big Windy Hot Springs Research Natural Area Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Nature study (research)
Experiences	**Primary:** Competence testing; Escaping crowds; experiencing nature
Benefits	**Personal:** Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Greater community involvement in land use planning process **Environmental:** Greater protection of distinctive natural landscapes

Table 19. Implementation framework decision for the Big Windy Hot Springs Research Natural Area Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.
Information and Education	Provide outreach to researches seeking a unique and scientific Primitive experience. Establish a relationship with stakeholders to increase community involvement with BLM's planning process.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 5 – Preacher Creek RMZ

Recreation management zone description: The focus this zone would be to provide high quality backpacking (multi-day), hiking, climbing, snowmobiling, and gold panning (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Backcountry Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 20 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is semi-primitive. See Table 8 for a description of Backcountry.

Table 20. Primary targeted experience and benefit outcomes in the Preacher Creek Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Backpacking, hiking, recreational gold panning, climbing, and snowmobiling
Experiences	**Primary:** Escaping crowds; Escaping personal pressures; Experiencing nature; Experiencing new and different things; Exploration of the area
Benefits	**Personal:** Greater connection with nature; Improved outlook on life; Improved physical fitness; Enhanced sense of personal freedom **Community/Social:** Positive economic contributions to communities **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue

Table 21. Implementation framework decision for the Preacher Creek Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for backpacking, gold panning, climbing and snowmobiling opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.
Information and Education	Provide outreach to recreationists seeking a backcountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain backcountry recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 6 – Harrison Creek RMZ

Recreation management zone description: The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a relatively low degree of risk in a Frontcountry Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 22 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Frontcountry. See Table 8 for a description of Frontcountry.

Table 22. Primary targeted experience and benefit outcomes in the Harrison Creek Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Hunting; Photography; Wildlife viewing; OHV use
Experiences	**Primary:** Escaping crowds; Escaping personal pressures; Experiencing nature
Benefits	**Personal:** Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Greater community involvement in the land use planning process **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue

Table 23. Implementation framework decision for the Harrison Creek Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hunting, photography, wildlife viewing, and OHV opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.
Information and Education	Provide outreach to state and local recreationists seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to provide increased community involvement in the land use planning process.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be developed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 7 – Wolf Creek RMZ

Recreation management zone description: The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 24 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Semi-Primitive. See Table 8 for a description of Semi-Primitive.

Table 24. Primary targeted experience and benefit outcomes in the Wolf Creek Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Hunting; Photography; Wildlife; Viewing
Experiences	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature
Benefits	**Personal:** Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater community involvement in the land use planning process **Environmental:** Heightened awareness of the natural world Economic: Increased local tourism revenue

Table 25. Implementation framework decision for the Wolf Creek Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for non-motorized hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.
Information and Education	Provide outreach to recreationists seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to increase community involvement in BLM's planning process.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Specific limitations on OHVs to be developed through travel management planning. Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 8 – Clums RMZ

Recreation management zone description: The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a lower degree of risk in a Middlecountry Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 26 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Middlecountry. See Table 8 for a description of Middlecountry.

Table 26. Primary targeted experience and benefit outcomes in the Clums Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Hunting; Photography; Wildlife viewing; OHV use
Experiences	**Primary:** Escaping crowds; Escaping personal pressures; Experiencing nature
Benefits	**Personal:** Enhanced sense of personal freedom; Greater connection with nature **Community/Social:** Greater community involvement in the land use planning process **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue

Table 27. Implementation framework decision for the Clums Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for both non-motorized (hunting, photography and wildlife viewing) and motorized (OHV use) opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.
Information and Education	Provide outreach to state and local users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Middle-country recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Travel management plan will be completed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Steese SRMA - RMZ 9 – Bachelor Creek RMZ

Recreation management zone description: The focus this zone would be to provide backpacking, hiking, gold panning, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge and a moderate level of risk in a Middlecountry Interior Alaska setting.

Objective: Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed in Table 28 (4.0 on a probability scale where: 1= not at all realized and 5= totally realized).

Recreation setting character is Middlecountry. See Table 8 for a description of Middlecountry.

Table 28. Primary targeted experience and benefit outcomes in the Bachelor Creek Recreation Management Zone

Recreation Attribute	Outcomes
Activities	**Primary:** Backpacking; Hiking/walking; Recreational Gold Panning; OHV use
Experiences	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area
Benefits	**Personal:** Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Positive economic contributions to communities **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue

Table 29. Implementation framework decision for the Bachelor Creek Recreation Management Zone

Implementation Actions	Description
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for backpacking, hiking, gold panning, and OHV opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.
Information and Education	Provide outreach to recreationists seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcomes and setting character. *OHV area designation:* LIMITED Travel management plan will be developed within five years of the ROD. *General:* Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

2.2.22 Travel Management

Goal

Provide opportunities for a range of motorized and non-motorized uses on public lands while protecting resources and minimizing conflicts among various users

Decisions

TM-1: Designate all lands in the planning area as Limited to motorized travel activities (43 CFR 8340.0-5(f), (g) and (h)) (see Table 11). Develop specific limitations through transportation and travel management planning.

Limited: "…an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: Numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions."

TM-2: The following would be exempt from OHV decisions: any fire, military, emergency, or law enforcement vehicle used for emergency purposes; and any vehicle whose use is expressly authorized by the Authorized Officer, or otherwise officially approved (43 CFR 8340.0–5).

TM-3: Manage OHV use in accordance with BLM's Travel and Transportation Handbook H-8342.

TM-4: Where off-road vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historic resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. (43 CFR 8341.2)

TM-5: Public land routes, roads or trails determined to cause considerable adverse impacts or to constitute a nuisance or threat to public safety would be considered for relocation or closure and rehabilitation after appropriate coordination with applicable agencies and partners.

TM-6: Where authorized, construction of roads or trails may occur in support of mining, rights-of-way, and recreational facilities.

TM-7: Complete a comprehensive transportation and travel management plan for the Steese Planning Area within five years of this Record of Decision. Collect additional data as needed to support this planning effort. Develop the transportation and travel management plan using a public process, allowing for additional public and agency input. This process will include publishing a *Federal Register* Notice, public scoping meetings and if any closures are proposed, a formal hearing to address the closure procedures under 43 CFR 36.11 (h) as well as limitations affecting ANILCA provisions listed in Title VIII and Title XI. Additional NEPA analysis will be completed at that time.

Limitations imposed by travel management planning may include: vehicle weight, vehicle width, season of use, existing trails, designated trails, permitted access, and game retrieval options.

TM-8: Establish interim management prescriptions until completion of the Travel Management Plan: Current management outlined in Alternative A, No Action Alternative (Map 10) with the addition of the following limitations:

Implement a 1,000 pound curb weight and 50 inch width limitation for snowmobiles to replace 1,500 pound GVWR limitation in the Steese National Conservation Area and Birch Creek WSR corridor.

Implement a 1,000 pound curb weight limitation and 50 inch width for summer OHVs to replace 1,500 pound GVWR limitation in the Steese National Conservation Area.

Birch Creek WSR: Allow use of motorboats, hovercraft, and airboats without specific authorization.

The Mount Prindle and Big Windy Hot Springs RNAs will include limitations on OHV use (Map 10), given that the OHV area designation changes from Closed to Limited pursuant to this ROD. Limit OHV use in RNAs to winter OHV use only by snowmobiles 1,000 pounds or less in weight and 50 inches or less in width.

Limitations on Travel Management Planning

TM-9: The BLM will develop a step-down travel management plan within five years of the Record of Decision. Wildlife management decisions set sideboards on what can be considered in the travel management plan.

Wildlife management prescriptions in crucial caribou and Dall sheep habitat (Map 5) include limitations on OHV use. These will be implemented through travel management planning.

Cross-country summer OHV use will not be allowed without a permit.

Wildlife decisions identified in section 2.2.16 of this document have management prescriptions that include non-motorized travel management prescriptions. Domestic sheep, goats and camelids (including alpaca and llama) are prohibited in Dall sheep habitat and adjacent lands.

TM-10: R.S. 2477 rights are determined through a process that is entirely independent of the BLM's planning process. Consequently, travel management planning should not take into consideration

R.S. 2477 assertions or evidence. Travel management planning will be founded on an independently determined purpose and need that is based on resource uses and associated access to public lands and waters. At such time as a decision is made on R.S. 2477 assertions, the BLM will adjust its travel routes accordingly.

Rationale: Recreational OHV use is resulting in resource damage such as trail braiding, user-created trails, and damage to vegetation, erosion, thermokarsting, changes in vegetation composition, and spread of non-native invasive plants. Limiting the use of OHVs by weight, seasonal closure, and/or to designated routes are nationally accepted methods for protecting resources from damage by OHV use. Interior Alaska is a fragile landscape with seasonally frozen ground and permafrost making summer use of OHVs difficult. Traveling on ice-rich permafrost areas causes thawing, ground degradation and vegetation damage.

Limiting the use of OHVs by weight, seasonal closure, and/or to existing routes or in some cases considering dispersed cross-country travel will help maintain the appropriate recreational setting. Specific decisions on limitations will be further analyzed in the transportation and travel management plan.

Weight limitation changes from pounds GVWR to curb weight allows for the same types and sizes of vehicles allowed under Alternative A. Curb weight is consistent with the generally allowed uses on adjacent State lands.

2.2.23 Hazardous Materials

Goal

Protect public health and safety and environmental resources by minimizing environmental contamination from chemical, biological, and radiological sources on federal property or BLM-operated facilities.

Decisions

HazMat-1: Environmental remediation activities will follow the State of Alaska and federal environment regulations and laws, which outline the cleanup standards for contaminated sites. Clean up levels/standards may be implemented based on the future land use determination.

HazMat-2: The SOPs (Appendix A, “Standard Operating Procedures and Fluid Mineral Leasing Stipulations”) will apply to BLM-authorized activities to minimize the probability of contamination on public lands when hazardous materials are utilized.

HazMat-3: Educate permittees on the importance of developing site-specific best management practices that minimize the potential for release of hazardous materials to the environment.

HazMat-4: Monitor land use activities to identify potential contaminated sites as an integral part of maintaining healthy lands. Design cleanup actions to limit and reduce the environmental liabilities for the BLM.

2.2.24 Subsistence

Goals

Maintain sufficient quality and quantity of habitat to support healthy populations of important subsistence species, including moose and caribou.

Effectively manage subsistence resources and uses by working with the local Regional Advisory Councils, ADF&G, and subsistence users. Implementation of a “rural priority” will be made by the Regional Advisory Council and Federal Subsistence Board through regulations, in coordination with federal and State land and wildlife management agencies. Agencies, including the BLM, will aid in enforcing the priority for rural subsistence use on federal public lands.

Provide for reasonable access to subsistence resources by federally qualified subsistence users as directed in ANILCA.

Minimize displacement of subsistence resources from traditional subsistence harvest areas (i.e., displacement of resources that may occur as a result of activities permitted by the BLM).

Maintain consistent subsistence management with adjacent land managers/owners.

Decisions

ASUB-1: At the project or permitting level, develop measures that serve to minimize impacts to subsistence uses, users, and/or resources. This may include avoidance of specific areas or limitations on season of use.

ASUB-2: Protect important Fortymile caribou herd and White Mountains caribou herd calving and post-calving areas by restricting land use activities during times caribou are present (see sections 2.2.16 and standard operating procedures in Appendix A).

ASUB-3: Implement the SOPs and Fluid Mineral Leasing Stipulations (Appendix A, "Standard Operating Procedures and Fluid Mineral Leasing Stipulations") to assure that physical and legal access to and movement corridors for subsistence resources are maintained when activities are permitted and to minimize displacement of subsistence resources.

ASUB-4: Comply with ANILCA Section 810 during analysis of all land use proposals. The management of federal public lands is to cause the least adverse impact possible on rural residents who depend on subsistence uses of the resources of such lands (ANILCA Section 802).

ASUB-5: Require infrastructure (such as roads, power lines, other ROW, buildings, pipelines, towers) be constructed in a manner that it does not unreasonably impede access to subsistence resources. Restrict development of infrastructure or land disturbance in areas of high subsistence resource values or traditional harvest areas, where these activities will significantly restrict access by subsistence users.

2.2.25 Research Natural Areas

Goal

Provide areas where natural ecosystems and processes are undisturbed so that they can be studied and understood, and to provide an undisturbed area for comparison with other areas so that effects of management and use can be assessed. Maintain reference conditions for current and future scientific comparison.

Decisions

RNA-1: Retain two designated Research Natural Areas (RNAs): the Mount Prindle RNA (2,800 acres) and Big Windy Hot Springs RNA (160 acres).

The RNAs will be redesignated from Closed to Limited OHV use, with the specific OHV use limitations determined through the supplemental rule and travel management plan development processes as described in section 2.2.21. Summer use of OHVs is prohibited. Natural processes, including wildland fire, will be allowed to continue with as little interference as possible. Hiking, hunting, and nature appreciation are allowed. The RNAs are closed to mineral entry and mineral leasing. No surface-disturbing activities allowed except BLM-authorized research projects and primitive hiking trails.

The RNAs will be managed for minimal anthropogenic disturbance. Primitive camping and hiking trails will be allowed in the RNAs.

2.2.26 Wild and Scenic Rivers

Goal

Protect outstandingly remarkable river-related values, water quality, and free-flowing condition of rivers designated as components of the National Wild and Scenic Rivers System.

Decisions

WSR-1: Manage Birch Creek according to BLM Manual 6400 – Wild and Scenic Rivers – Policy and Program Direction for Identification, Evaluation and Management and ANILCA.

WSR-2: Manage Birch Creek to protect and enhance the Outstandingly Remarkable Values, water quality and free-flowing condition, and maintain the river's classification.

WSR-3: Revise or amend the existing Birch Creek River Management Plan to incorporate resource protection decisions from this ROD, and to address development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of the Wild and Scenic Rivers Act.

Acronyms

AAC	Alaska Administrative Code
AO	Authorized Officer
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
EIS	environmental impact statement
EPA	Environmental Protection Agency
FLPMA	Federal Land Policy and Management Act
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRA	National Recreation Area
OHV	off-highway vehicle
PLO	public land order
RCA	Riparian Conservation Area
RMP	Resource Management Plan
ROD	Record of Decision
SOP	Standard Operating Procedures
U.S.	United States
U.S.C.	United States Code
USDI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service
WSR	Wild and Scenic River

Glossary

all-terrain vehicle (ATV): A wheeled vehicle other than a snowmobile that is defined as having a curb weight of 1,000 pounds or less, maximum width of 50-inches or less, steered using handlebars, travels on three or more low-pressure tires, and has a seat designed to be straddled by the operator.

avoidance, mitigation: Avoiding the impact altogether by not taking a certain action or parts of an action. (40 CFR 1508.20) (e.g., May also include avoiding the impact by moving the proposed action to a different time or location.)

compensatory mitigation: Compensating for the impact by replacing or providing substitute resources or environments. (40 CFR 1508.20)

compensatory mitigation projects: Specific, on-the-ground actions (mitigation measures) to improve habitats (e.g., chemical vegetation treatments)

compensatory mitigation sites: The durable areas where compensatory mitigation projects will occur.

curb weight: The weight of a vehicle with a full tank of fuel and all fluids full, but with no people or cargo loaded. “Curb weight” is synonymous with “wet weight” and “operating weight”.

gross vehicle weight rating (GVWR): The total weight of the vehicle plus the maximum loaded carrying capacity of the vehicle as specified by the manufacturer (i.e., GVWR = weight of vehicle + fuel + passengers + cargo, as per manufacturers limitations). Pull-behind trailers are not included in the GVWR calculation for the vehicle.

in-kind, mitigation: In-kind mitigation is the replacement or substitution of resources or values that are of the same type and kind as those impacted. (e.g., greater sage-grouse winter habitat is lost, and greater sage-grouse winter habitat is enhanced or conserved.).

motorized vehicles: Vehicles that are propelled by motors or engines, such as cars, trucks, off-highway vehicles (OHV), motorcycles, and snowmobiles.

off-highway vehicle (OHV): Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: 1) any non-amphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorizing officer, or otherwise officially approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used for national defense (CFR 43 sec. 8340.05(a)). OHVs generally include dirt motorcycles, dune buggies, jeeps, four-wheel drive vehicles, snowmobiles, and ATVs. OHV is synonymous with Off-Road Vehicle (ORV), Utility Type (or Terrain) Vehicle (UTV), and All Terrain Vehicle (ATV). Aircraft are not OHVs.

out-of-kind, mitigation: Out-of-kind is the replacement or substitution of resources or values that are not the same type and kind as those impacted, but are related or similar. (e.g., greater sage-grouse winter habitat is lost, but new greater sage-grouse nesting habitat is enhanced or conserved.)

over-Snow vehicle: An over-snow vehicle is defined as a motor vehicle that is designed for use over snow that runs on a track or tracks and/or a ski or skis, while in use over snow. An over-snow vehicle does not include machinery used strictly for the grooming of non-motorized trails.

rectify, mitigation: Rectifying the impact by repairing, rehabilitating, or restoring the affected environment. (40 CFR 1508.20)

reduce or eliminate over time, mitigation: Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (40 CFR 1508.20)

Research Natural Area (RNA): An area that is established and maintained for the primary purpose of research and education because the land has one or more of the following characteristics: 1) a typical representation of a common plant or animal association; 2) an unusual plant or animal association; 3) a threatened or endangered plant or animal species; 4) a typical representation of common geologic, soil, or water features; or 5) outstanding or unusual geologic, soil, or water features. Uses of RNAs are defined in 43 CFR 8223.1.

residual impact: Impacts from a land-use authorization that remain after applying avoidance, minimization, rectification, and reduction/elimination measures; also referred to as unavoidable impacts.

scientific use: This category of cultural resource use may be applied to any cultural property in the planning area available for consideration as the subject of scientific or historical study at the present time, using currently available research techniques. Study includes methods that may result in the property's physical alteration.

snowmachine, snowmobile: A motorized vehicle that is designed for use over snow that runs on a track or tracks and uses a ski or skis for steering, has a curb weight of 1,000 pounds or less, maximum width of 50-inches or less, steered using handlebars, and has a seat designed to be straddled by the operator. A snowmobile does not include machinery used strictly for the grooming of non-motorized trails.

utility type (or terrain) vehicle (UTV): Any recreational motor vehicle other than an all-terrain vehicle, motorcycle, or snowmobile designed for and capable of travel over unpaved roads, traveling on four or more low-pressure tires, a curb weight of 1,500 pounds or less, and maximum width is 64 inches or less. Utility type vehicles do not include vehicles specially designed to carry a person with disabilities.

withdrawal: Federal land set aside and dedicated to a present, governmental use; public land set aside for some other public purpose, e.g., pending a determination of how the land is to be used; an action approved by the Secretary or a law enacted by Congress that closes land to specific uses under the public land laws (usually sale, settlement, location, and entry), or limits use to maintain public values or reserves area for particular public use or program, or that transfers jurisdiction of an area to another federal agency. These are usually enacted by a public land order or legislation.

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Appendix A. Standard Operating Procedures and Fluid Mineral Leasing Stipulations

A.1. Introduction

The BLM has developed guidelines to protect resources called "Standard Operating Procedures" and "Fluid Mineral Leasing Stipulations" (Leasing Stipulations) as part of this planning process. These guidelines were guided by the standards and guidelines included in the Alaska Statewide Land Health Standards (IM AK 2004-023) and by the goals outlined in this Approved RMP. The Standard Operating Procedures are requirements, procedures, management practices, or design features that the BLM will use to protect resources. Leasing Stipulations are requirements to reduce impacts to natural resources from fluid mineral exploration and development. The Standard Operating Procedures and Leasing Stipulations generally do not restate requirements that already exist in regulations or laws, including state laws. Regulations or laws may require conditions that are more stringent than those presented in this section. Chapter 6 of the *Analysis of the Management Situation for the Eastern Interior RMP* (BLM 2009a) includes a partial list of mandates and authorities pertaining to federal lands.

A.1.1. Standard Operating Procedures

Standard Operating Procedures apply to all actions, whether implemented by the BLM or authorized by the BLM and implemented by another individual, organization or agency on public land. These were based on the best information available during development of the Eastern Interior Resource Management Plan and Environmental Impact Statement.

The BLM will apply the Standard Operating Procedures to BLM actions and BLM-authorized activities including, but not limited to: Federal Land Policy and Management Act leases and permits; special recreation permits; oil and gas activities; renewable energy activities; mining plans of operation; and, authorizations for rights-of-way. For fluid mineral leasing activities, Standard Operating Procedures would apply in addition to the Standard Lease Terms and Leasing Stipulations. Only those Standard Operating Procedures concerning resources that are potentially affected by the action will be applied to authorized permits and authorizations. For example, Standard Operating Procedures protecting caribou habitat would not apply to projects that are not located in caribou habitat.

These Standard Operating Procedures are implementation level actions. They may be modified through site-specific analysis of subsequent authorizations, but still must meet the goals and objectives of the Approved RMP. Standard Operating Procedures will continue to evolve as better resource information is gained and/or changes in technology become available. Modifications to Standard Operating Procedures may be appropriate if other measures are taken to protect resources that would result in the same or reduced impact.

Standard Operating Procedures are considered during the site-specific analysis that occurs during activity level planning and if adopted, are applied as conditions of approval to land use authorizations and permits.

Standard Operating Procedures are not selected as a condition of the permitted activities if the applicant has included them as part of the proposal or has identified an alternative, such as adoption of an acceptable best management practice to meet stated resource management objectives. Applicants are encouraged to consider alternative methods, best management

practices, and/or design features for BLM's consideration during the permitting process. If an applicant does not include alternatives for agency consideration, the Standard Operating Procedures identified will be incorporated into an approval for a proposed activity.

The Authorized Officer or their representative is responsible for ensuring that the intent of the Standard Operating Procedures presented in this Approved RMP are followed and that permittees comply with the conditions of their authorization. Non-compliance will be documented and a notice will be sent to the permittee, along with corrective actions and a time frame in which the actions are to be completed.

A.1.2. Fluid Mineral Leasing Stipulations

Fluid Mineral Leasing Stipulations (Leasing Stipulations) are specific to fluid mineral activity, including exploration, development, and production. These Leasing Stipulations are included in a lease in addition to the Standard Lease Terms. Fluid minerals include oil and gas, geothermal, and coal bed natural gas. Leasing Stipulations constitute significant restrictions on the conduct of operations under a lease.

Additional site-specific Leasing Stipulations may be added, if determined necessary, through further analysis. Since no fluid leasing is assumed during the life of this plan, leasing may only occur following additional environmental analysis. Additional stipulations may be developed at that time.

Leasing Stipulations may be excepted, modified or waived by the Authorized Officer pursuant to 43 CFR 3101.1-4 and WO-IM-2008-032. The environmental analysis prepared for fluid mineral development (such as Applications for Permit to Drill or sundry notices) will address proposals to except, modify, or waive a Leasing Stipulation. To except, modify, or waive a stipulation, the environmental analysis would need to show that: (1) the circumstances or relative resource values in the area had changed following issuance of the lease; or (2) less restrictive requirements could be developed to protect the resource of concern; or (3) operations could be conducted without causing unacceptable impacts; or (4) the resource value of concern does not occur within the lease area. An exception exempts the holder of a lease from the Leasing Stipulation on a one-time basis. A modification changes the language or provisions of a Leasing Stipulation, either temporarily or for the term of the lease. A waiver permanently exempts the Leasing Stipulation.

Compliance with Leasing Stipulations is monitored by the Authorized Officer or their representative. Non-compliance may result in monetary fines or operation shut-down.

Standard Lease Terms

All fluid mineral leases will include the Standard Lease Terms contained in BLM Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, October 1992 or later addition. The Standard Lease Terms provide the lessee the right to use the leased land to explore for, drill for, extract, remove, and dispose of fluid mineral deposits located under the leased lands. The Standard Lease Terms also require that operations be conducted in a manner that minimizes impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

Table A-1. Fluid mineral leasing stipulations

Goal	Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Prevent avoidable damage from proposed land uses to habitats supporting Special Status Species animals and plants, and their habitats.	**Stipulation 1:** The lease area may contain or be identified with Special Status Species or their habitats. BLM may require applicants to avoid or minimize impacts to these species pursuant to BLM policy and Endangered Species Act consultation.	Areas open to fluid mineral leasing	**Exception:** None **Modification:** None **Waiver:** None
When authorizing fluid leasable minerals actions ensure that goals to protect other resource values in the planning area are met to the extent possible.	**Stipulation 2:** Upon abandonment or expiration of the lease, all fluid mineral related facilities will be removed and sites rehabilitated as near to the original condition as practicable, subject to review of the AO.	Areas open to fluid mineral leasing	**Exception:** The AO determines that it is in the best interest of the public to retain some or all facilities. **Modification:** None **Waiver:** None
When authorizing fluid leasable minerals actions ensure that goals to protect other resource values in the planning area are met to the extent possible.	**Stipulation 3:** Exploratory drilling will be limited to temporary facilities such as ice pads, ice roads, ice airstrips, and temporary platforms.	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that construction of permanent facilities such as gravel airstrips, storage pads, and connecting roads are environmentally preferable or that exploring from temporary facilities is not practical or economically feasible. **Modification:** None **Waiver:** None
Maintain and protect aquatic habitat to support populations of well-distributed native fish populations.	**Stipulation 4:** Drilling is prohibited in fish-bearing lake and rivers and streams within the active floodplain.	Fish bearing rivers, streams, and lakes	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** None **Waiver:** None
Minimize impacts to wildlife species from BLM-authorized	**Stipulation 5:** No exploration activities from May 10 through June 1	Identified caribou calving/postcalving and Dall	**Exception:** The AO may grant an exception if the lessee demonstrates that calving caribou or

Goal	Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
activities.	in Dall sheep habitats and from May 15 through July 15 in caribou calving/postcalving habitat. Construction of production facilities and production activities may occur (no work over rigs).	sheep habitats	Dall sheep are not currently using the area. **Modification:** Season may be shortened or extended based on actual occupancy of the area. **Waiver:** This stipulation may be waived if caribou migratory patterns change and the areas are no longer used for calving.
Minimize impacts to wildlife species from BLM-authorized activities.	**Stipulation 6:** No exploration or development activities within 500 meters of active priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None
Minimize impacts to wildlife species from BLM-authorized activities.	**Stipulation 7:** No motorized ground-vehicle use or facility construction within a half mile of any known priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None

A.1.3. Standard Operating Procedures

The following is a complete list of the Standard Operating Procedures (SOPs) that BLM will apply during implementation of the Approved RMP. These SOPs have been renumbered thus numbers do not exactly match the numbers in the Eastern Interior Proposed RMP/Final EIS.

A.1.3.1. Cultural and Paleontology

SOP C-1 Mitigation measures will be considered for all actions that may potentially affect cultural resources. If the AO determines mitigation measures are necessary to protect and conserve known cultural resources, a mitigation plan will be approved by SHPO and implemented by the AO. Mitigation plans will be reviewed as part of Section 106 consultation for National Register of Historic Places eligible or listed properties. The extent and nature of recommended mitigation will be commensurate with the significance of the cultural resource involved and the anticipated extent of the damage. Costs for mitigation will be borne by the land use applicant.

SOP C-2 If damage to known significant paleontological resources cannot be avoided, the applicant (or the BLM for internal actions) will perform scientific examination of the impacted significant paleontological resources followed by mitigation approved by the AO. This may include the professional collection and analysis of significant specimens by scientists.

A.1.3.2. Fish and Aquatic Species

SOP FA-1 No low water crossings (fords) will be permitted in priority fish species spawning habitat, during times of active spawning and when immobile life stages of fish are present (eggs and alevins) unless it is determined that impacts would be negligible.

SOP FA-2 New, replacement, and reconstructed stream crossing structures (such as bridges and culverts) will be designed to:

- Convey flood flows consistent with the purpose and period of use of the structure (e.g. seasonal or year-round) under natural conditions consistent with BLM manual 9112;
- Preserve or improve fish passage;
- Maintain channel integrity;
- Provide slope protection e.g. riprap) on both the inlet and outlet end of culverts and on approach embankments of bridges; and,
- Incorporate adjacent reclamation (such as willow cuttings, wattles, brush layering) on the disturbed areas up and downstream of the abutments.

SOP FA-3 Application of pesticides and other toxicants will occur in a manner that does not measurably inhibit the attainment of desired conditions or adversely impacts priority aquatic species.

SOP FA-4 All water intakes will be screened and designed to prevent fish intake and mortality.

SOP FA-5 Streams altered by channeling, diversion, or damming will be restored to a condition that maintains or improves aquatic and riparian habitats to pre-disturbance levels.

SOP FA-6 Baseline geomorphic and hydrologic data will be required prior to surface-disturbing activities with the potential to affect stream channel integrity; reduce riparian functioning condition; or, reduce the Watershed Condition Rating. The BLM will be available to advise operators on the exact type of information and detail needed to meet this requirement.

A.1.3.3. Forestry

SOP Forest-1 Commercial timber sale authorizations will require the proper site preparation to ensure natural regeneration of timber stands.

SOP Forest-2 For commercial timber sales and personal use timber permits the requirement for a buffer will be considered to prevent disturbance of priority fish species habitat, sedimentation into streams, impairment of visual resource qualities, or to protect outstandingly remarkable values of wild and scenic rivers. Buffer widths will be determined on a case-by-case basis.

SOP Forest-3 For commercial timber sales and personal use timber permits the requirement for winter only operations will be considered in order to avoid construction of new roads and to reduce impacts to soils, vegetation, and riparian areas.

A.1.3.4. Hazardous Materials and Waste Management

SOP Hazmat-1 All solid wastes, including incinerated ash, will be removed by the permittee from public lands and disposed of within an Alaska Department of Environmental Conservation (ADEC) approved facility, unless otherwise specified. Solid waste combustibles may be incinerated in a contained and controlled manner, however, burn restrictions may apply during high-risk wildland fire seasons. Burial of solid waste is not authorized on public lands.

SOP Hazmat-2 Pit privies must be at least 100 feet from any water body. The AO may require a larger separation distance in order to protect high-value resources. No septic system will be installed without AO approval. Gray water must be filtered before being released to the surface and must be discharged in a way that does not cause erosion. Gray water may not be released to any water body.

SOP Hazmat-3 All hazardous materials and petroleum, oil, and lubricants (POLs) will be stored in containers that are compatible to the material being stored. Containers will be labeled with the responsible party's name, contents of the container, the date the product was purchased, and the date the container was filled.

SOP Hazmat-4 Storage of POLs at any site will require secondary containment. The containment area must be constructed to hold at least 110 percent of the largest container, lined with an impermeable liner that is free of cracks or gaps, compatible with the contents stored, and sufficiently impervious to contain leaks, or spills. The containment area must be covered to eliminate the collection of rainwater within the containment area. The AO may also require a Spill Prevention and Contingency Plan.

SOP Hazmat-5 If refueling cannot be avoided within the riparian zone or within 100 feet of a water body, a catch basin and POL-type absorbent pads will be utilized to collect any overflow.

SOP Hazmat-6 Leaking equipment must have a drip basin placed under the leak area and the basin must be protected from the collection of rain water to ensure no release to the surrounding environment. When maintenance to equipment has the potential to release fluids, an impermeable liner must be utilized to ensure that spills are contained.

SOP Hazmat-7 All spills will be contained and cleaned up upon discovery. Spills that are reportable to ADEC will also be reported to the AO in the same time frame.

A.1.3.5. Mineral Materials

SOP MM-1 Use existing upland material sources that meet suitability and economic needs whenever possible. Sales or permits for in-stream gravel extraction within an active channel will not be allowed in priority fish species spawning habitat.

SOP MM-2 When authorizing mineral material sale sites, avoid habitats critical to local fish or wildlife populations (such as fish spawning and overwintering, calving areas, or raptor nesting sites). Avoid key geomorphic features, such as the river cut banks and associated riparian zones; springs; active channels of small, single channel rivers; and, wetlands.

SOP MM-3 When authorizing mineral material sale sites, avoid priority plant species and communities. If sales are authorized in vegetated areas all overburden, vegetation mats and debris will be saved and appropriately stored for use during site reclamation to facilitate vegetative recovery.

SOP MM-4 When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

A.1.3.6. Soils

SOP Soils-1 Stockpiled soil and overburden will be spread over mine tailings and stabilized to minimize erosion. The shape of contoured tailing and overburden should approximate the shape of surrounding terrain.

SOP Soils-2 Roadways will be ditched on the uphill side. Culverts or low water crossings will be installed at suitable intervals. Spacing of drainage devices and water bars will be appropriate for the road gradient and soil erodibility of the site.

SOP Soils-3 Design roads and trails for minimal disruption of natural drainage patterns.

SOP Soils-4 Roads and trails should avoid areas with unstable or fragile soils.

SOP Soils-5 Overland moves and heavy equipment use:

- Whenever possible, overland moves that are a part of permitted operations will occur during winter when frost and snow cover is sufficient to minimize vegetation and soil disturbance and compaction. The AO will determine the date when sufficient frost and snow cover exists and no overland moves should occur until these conditions are met.
- Design and locate winter trails and ice roads for overland moves to minimize compaction of soils and breakage, abrasion, compaction, or displacement of vegetation.
- Clearing of drifted snow is generally allowed, to the extent that vegetative ground cover is not disturbed.
- Offsets of winter trail/ice road locations may be required to avoid using the same route or track each subsequent year.
- When access is required in snow-free months, routes that utilize naturally hardened sites will be selected to avoid trail braiding and wetlands will be avoided. The permittee will employ vehicle types and methods that minimize vegetation and soil disturbance, such as

use of air or water craft, utilizing existing roads or trails, or use of low ground pressure vehicles.

- The use of heavy machinery in saturated soil conditions will be limited to low ground pressure designated machinery.

SOP Soils-6 At sites where stockpiled soil quantities are insufficient to distribute over the entire disturbed area, specific areas in each zone should be selected, to receive organic material. Use organic material from adjacent areas if practicable. At sites where organic material is not available, stockpiles of fine inorganic material may be used in place of the organics.

SOP Soils-7 Prudent use of erosion control measures, including diversion terraces, riprap, matting, temporary sediment traps, and water bars will be employed as necessary to control soil erosion. The type and location of sediment control structure, including construction methods, will vary by site-specific characteristics.

SOP Soils-8 Areas disturbed during project operation or construction will be restored to as near pre-project conditions as practical. Wetland topsoil will be selectively handled. Mulching, erosion control measures, and fertilization may be required to achieve acceptable stabilization of surface materials. Inter-seeding, secondary seeding, or staggered seeding may be required to accomplish revegetation objectives. Follow-up seeding or corrective erosion control measures may be required on areas of surface disturbance which experience reclamation failure. Corrective erosion control measures could include, but are not limited to, broadcasting woody debris, planting viable portions of live shrubs (sprigging), and transplanting live vegetation from adjacent areas.

SOP Soils-9 The BLM recognizes that there may be more than one correct way to achieve successful reclamation of soil and water resources, and a variety of methods may be appropriate to the varying circumstances. The BLM will continue to allow applicants to use their own expertise in recommending and implementing construction and reclamation projects. These allowances still hold the applicant responsible for final reclamation standards of performance. The BLM will review the applicant's reclamation plan and if needed, incorporate conditions of approval to enhance success and mitigate impacts.

SOP Soils-10 Reclamation of disturbed soils is expected to be accomplished as soon as possible after the disturbance occurs with efforts continuing until the site is stabilized.

SOP Soils-11 Reduce disturbance of soils by minimizing footprint of surface-disturbing activities, consolidating access to minimize the number of routes, and requiring prompt implementation of methods to mitigate soil erosion.

SOP Soils-12 Where practicable and feasible, avoid disturbance of the vegetative mat and permafrost soil areas.

SOP Soils-13 Natural revegetation of disturbed sites is the generally preferred method for restoration/stabilization of disturbed soils. Where erosion is problematic or rapid establishment of plant cover is desired, utilize a combination of seeding, planting, and transplanting of adult plants or vegetation mats, and/or fertilizing as necessary to mitigate soil erosion.

SOP Soils-14 When developing travel management plans, minimize impacts through appropriate restrictions on cross-country OHV use. Monitor soils for impacts that may be caused by OHVs.

SOP Soils-15 For long-term storage of soil stockpiles provide protective cover such as organic mulch, herbaceous vegetation, jute matting, or other erosion-preventative fabric.

A.1.3.7. Vegetation and Non-Native Species

SOP Veg-1 All vegetation treatments and revegetation of surface disturbance will require an approved site-specific plan designed to achieve desired conditions and prevent the introduction of non-native invasive plants (invasive plants). These plans should describe current vegetative conditions: including plant community composition, structure, cover, seral stages, soil descriptions, age class distribution if applicable, and presence of invasive plants, desired vegetative conditions (based on the ecological capability of the site), treatment methods, measures for preventing introduction and spread of invasive plants, and monitoring actions. Whenever possible, treatments will use native vegetation and seed. Non-native vegetation and seed may be used with specific approval from the AO, and in the following cases (1) where native species are not available in sufficient quantities; (2) where native species are incapable of maintaining or achieving the objectives; or, (3) where non-native species are essential to the functional integrity of the site. Seed must meet Alaska certification standards (11 AAC 34.020 Prohibited and Restricted Noxious Weeds) and any amendments to the existing seed laws or new seed legislation.

SOP NIS-1 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only feed and mulch (hay cubes, hay pellets, or straw, for example) certified as weed-free through the Alaska Weed-Free Forage certification program (or other programs with approval of the AO) will be authorized on BLM lands. Where Alaska certified sources are not available, locally produced forage and mulch may be used with approval from the AO. If no certified weed-free or local sources are available, other products may be used with the approval of the AO.

SOP NIS-2 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only gravel and material certified as weed-free through the Alaska Weed-Free Gravel certification program will be authorized on BLM lands. Where weed-free gravel and materials are not available other sources may be used, with the approval of the AO.

SOP NIS-3 Fire management actions, including prescribed fire operations, wildland fire suppression and fire rehabilitation efforts, will protect burned and adjacent areas from the introduction and spread of non-native invasive plants. Protection may include the use of washing stations with a containment system.

SOP NIS-5 All actions implemented or authorized by the BLM will include measures to prevent the introduction and spread of non-native invasive species, if applicable to the site. Operators shall prevent and control invasive and non-native plant and noxious weed introduction or spread. Operators will be responsible for control and/or eradication of new infestations of non-native plants or noxious weeds and are advised to conduct a pre-disturbance site assessment of the presence of non-native plants or noxious weeds.

A.1.3.8. Water and Riparian

SOP Water-1 Where instream operations are authorized; streams must be diverted using an appropriately sized bypass channel that is stable and resistant to erosion.

SOP Water-2 In mining operations and fluid mineral leasing operations, all process water and ground water seeping into an operating area must be treated appropriately (i.e., use of settling ponds) prior to re-entering the natural water system.

SOP Water-3 Settling ponds will be cleaned out and maintained at appropriate intervals to comply with state and federal water quality standards. Fine sediment captured in the settling

ponds will be protected from washout and left in a stable condition at the end of each field season to prevent unnecessary or undue degradation to the environment during periods of non-operation.

SOP Water-4 All permitted operations will be conducted in such a manner to not block any stream or drainage system, or inhibit fish passage.

SOP Water-5 Structural and vegetative treatments in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

SOP Water-6 Projects requiring the withdrawal of water will be designed to maintain sufficient quantities of surface water and contributing groundwater to support fish, wildlife, and other beneficial uses.

SOP Water-7 State-designated stream crossings will be used where possible for vehicle travel. Stream crossings can be found on the Alaska Department of Fish and Game website under the General Permits Index-Authorized Vehicle Stream Crossings

SOP Water-8 Rivers and streams will be crossed by vehicles in locations that minimize impacts to stream channels, stream banks, and riparian vegetation.

SOP Water-9 When a stream must be crossed, the crossing will be as close to possible to a ninety degree angle to the stream. Stream crossings will be made at stable sections in the stream channel, which have low sensitivities to disturbance and low streambank erosion potential.

SOP Water-10 Disturbed stream banks will be recontoured and revegetated (or other protective measures will be taken) to prevent soil erosion into adjacent waters and provide stream bank stability. Active stream bank revegetation or other stabilization techniques (e.g., ADF&G 2005) will be required for all erosion-prone areas (such as stream bank and near stream areas) and active seeding and/or fertilization will be required for sites with little to no organic content (i.e., essentially bare mineral soil).

SOP Water-11 Streams altered by channeling or diversion will be restored to a condition that will allow for proper functioning of stream channels, riparian zones, wetlands and watersheds. Active streams will be returned to their natural watercourse or a new channel will be created that approximates the old natural channel.

SOP Water-12 To the extent feasible and practicable, channeling, diversion, or damming that will alter the natural hydrological conditions will be avoided. This is not intended to preclude activities which by nature must occur within floodplain-riparian areas, such as placer mining.

SOP Water-13 Structural and vegetative treatment in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

A.1.3.9. Wetlands and Floodplains

SOP Wetland-1 Protect, restore, and maintain wetland-floodplain, ecosystems to achieve a healthy and proper functioning condition that assures physical and biological diversity, productivity, and sustainability.

SOP Wetland-2 Coordinate, cooperate, and consult with federal, tribal, state, and local agencies, private landowners, and stakeholder organizations in order to foster a unified, science-based

adaptive management approach to wetland-floodplain management in a watershed/ecosystem context.

SOP Wetland-3 Provide a unified framework for BLM's science-based watershed approach to management of wetland-floodplain systems consistent with federal and state assessment methods, including monitoring, sampling, and reporting protocols.

SOP Wetland-4 Use educational and outreach programs to promote stewardship, conservation, and appreciation of wetland-floodplains.

SOP Wetland-5 Wetland-floodplain sites vary in physical, chemical, and biological characteristics, resource conditions, and local use impacts. Therefore, the objectives and management designed for an area shall be tailored to the conditions, conflicts, capability and improvement potential, and land use considerations on a watershed-specific basis. Wetland-floodplain mitigation measures developed using an interdisciplinary approach should be achievable, specific, and measurable.

SOP Wetland-6 Management actions should permit the natural functions of streams, including flood energy dissipation, bank building, stream-channel maintenance, filtration of sediment and other contaminants, water-storage, and aquifer recharge to operate without significant alteration. To accomplish these actions or functions, it is necessary to evaluate the interrelationships between wetland-floodplain systems and the hydrologic and geomorphic processes of the watershed.

SOP Wetland-7 Structural and vegetative treatment in floodplains, riparian zones and wetland areas will be compatible with the ecological capability of the site, including the system's hydrologic regime, and will contribute to the maintenance or restoration of natural and proper functioning conditions.

SOP Wetland-8 Avoid overland heavy equipment moves through wetlands in spring and summer. Stipulations and mitigating measures are provided on a case-by-case basis to ensure wetland conservation and practical management.

SOP Wetland-9 Identify, encourage, and support research and studies needed to ensure that floodplain-wetland area management objectives can be properly defined and met. Incorporate research finding into the planning and management of floodplain-wetland ecosystems.

A.1.3.10. Wildland Fire Management

SOP FM-1 The BLM will not be held responsible for protection of permittees' structures or their personal property from wildland fire. It is the responsibility of permittees and lessees to mitigate and minimize risk to their personal property and structures from wildland fire, following the conditions in their permit.

SOP FM-2 Gas-powered equipment must be equipped with manufacturer approved and functional spark arrestors.

SOP FM-3 To avoid the potential impacts to aquatic life, the application of fire chemicals including retardant will be avoided within 300 feet of waterbodies. Deviations are acceptable when life or property is threatened and fire chemicals reasonably expected to alleviate the threat. The AO may approve a deviation if potential damage to natural resources outweighs the impact to aquatic resources.

SOP FM-4 To the extent practicable, select the location for incident bases, camps, helibases, and so on to avoid riparian areas.

A.1.3.11. Wildlife

SOP Wild-1 Design pipelines and associated roads to allow the free movement of wildlife and the safe, unimpeded passage of the public while participating in traditional subsistence activities. The currently accepted design practices are: 1) Above-ground pipelines will be elevated a minimum of seven feet, measured from the ground to the bottom of the pipeline at vertical support members, to facilitate human and wildlife movement under the pipe; 2) In areas where facilities or terrain may funnel caribou movement, ramps over pipelines or buried pipelines may be required; and, 3) Where practicable, maintain a minimum distance of 500 feet between above-ground pipelines and roads.

SOP Wild-2 Prior to development of large facilities, the AO may require development of an ecological land classification map of the development area. The map will integrate geomorphology, surface form, and vegetation at a scale, level of resolution, and level of positional accuracy adequate for detailed analyses of development alternatives and facility siting options. The map will be prepared in time to plan one summer season of ground-based wildlife or vegetation surveys, if deemed necessary by the AO, before approval of facility location and construction.

SOP Wild-3 Whenever possible, operations that require vegetation removal will avoid the migratory bird nesting period of May 1 to July 15 (USFWS Advisory: Land Clearing Timing Guidance for Alaska Plan Ahead to Protect Nesting Birds. July 2009). If NEPA analysis reveals that this would unacceptably compromise project objectives or logistical feasibility, potential impacts must be identified, and mitigation applied that are appropriate to the magnitude and duration of expected effects. Assessments would focus on species of concern, priority habitats, and key risk factors. Permittees/project proponents will be reminded that it is their responsibility to comply with provisions of the Migratory Bird Treaty Act.

SOP Wild-4 Employ industry accepted best management practices to prevent raptors and other birds from colliding with or being electrocuted by utility lines, alternative energy structures, towers, and poles (APLIC 2006, http://www.aplic.org/). If possible bury utility lines in important bird areas. Where raptors are likely to nest in human-made structures (such as cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the raptors; equip the structures with either (1) devices engineered to discourage raptors from building nests, or (2) nesting platforms that will safely accommodate raptor nests without interfering with structure performance.

SOP Wild-5 Guy-wired apparatus, regardless of purpose, will be marked in accordance with the guidance provided by the USFWS Revised Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning , dated September 27, 2013, or a more current or contemporaneous version of that guidance.

SOP Wild-6 Activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities (May 10 through June 1 for Dall sheep lambing). However, ongoing mineral production activities will be allowed throughout these time periods. In these areas and time periods, aircraft associated with activities that require BLM authorization will maintain an altitude of at least 1,500 feet above ground level (except for takeoffs and landings), unless doing so would endanger human life or violate safe flying

practices. These seasonal restrictions can be modified when caribou or Dall sheep do not occupy the area.

SOP Wild-8 Within the Fortymile and White Mountains caribou calving and postcalving ranges (Map 84 of PRMP), mineral exploration activities will not be authorized from May 15 through July 15 unless the AO determines that caribou no longer occupy the specific area of the proposed operations. This seasonal restriction can be modified based on actual caribou occupancy of area.

SOP Wild-9 All reasonable precautions will be taken to avoid attracting wildlife to food and garbage. Garbage from all BLM-authorized activities will be removed and properly disposed to prevent habituation of wildlife or alteration of populations. The BLM may require food and garbage to be stored in bear-proof containers or by methods that make it unavailable to bears or other wildlife.

SOP Wild-10 To prevent the entrapment of small animals, particularly birds, all hollow pipes or tubes that are 2 to 10" in diameter will be filled or capped prior to installation (unless fixed horizontally).

Priority Raptor SOPs

Priority raptor species are peregrine falcon, gyrfalcon, bald eagle, and golden eagle. Nesting seasons are defined as: From April 15 through August 15 for bald eagles, golden eagles, and peregrine falcons; and, from March 15 through July 20 for gyrfalcons. Nesting season dates apply to SOP Wild-11 through SOP Wild-16. Exceptions to these raptor SOPs may be applied by the AO in situations where no practicable alternative exists; disturbance is adequately mitigated by site characteristics such as topography or vegetation, or by known tolerance of nesting birds to activities at the location; or where raptors establish nests near previously constructed facilities.

SOP Wild-11 To minimize the direct loss of priority raptor foraging habitat, all reasonable and practicable efforts will be made to locate permanent facilities as far from priority raptor nests as practicable and to minimize habitat loss. Of particular concern for avoidance are ponds, lakes, streams, wetlands, and riparian habitats

SOP Wild-12 To minimize disturbance to nesting priority raptors, aircraft authorized by the BLM are required to maintain an altitude of at least 1,500 feet above ground level when within one-half mile of priority raptor nesting sites during nesting season. This protection is not intended to restrict flights necessary to conduct wildlife surveys satisfying wildlife data collection requirements.

SOP Wild-13 To reduce disturbance to nesting priority raptors, campsites authorized by the BLM, including short- and long-term camps and agency work camps, must be located at least 500 meters from any known priority raptor nest site during the nesting season.

SOP Wild-14 Authorized human activity within 500 meters of priority raptor nest sites will be minimized during the nesting season. The cumulative number of authorized visits (defined as each day in which work is done within 500 meters of a nest site) to any nest site per nesting season, by all authorized users, must be limited to three visits per nest site.

SOP Wild-15 To reduce disturbance impacts to priority raptors, motorized ground-vehicle use must be minimized within one mile of any known priority raptor nest during the nesting season. Such use is prohibited within one-half mile of nests during the nesting season.

SOP Wild-16 Construction within one-half mile of known priority raptor nests is prohibited during the nesting season. No facilities that will be used or accessed during the nesting period (including the area of associated human activity by facility users) can be constructed within one-half mile of known priority raptor nesting sites.

Appendix B. Fisheries and Aquatic Resources

B.1. Watershed Classification

Watersheds within the Eastern Interior Planning Area were categorized as either conservation or restoration watersheds. Within these two categories, BLM Alaska evaluated and prioritized watersheds based on 10 factors developed by the fisheries program staff and based on fisheries science, BLM policy, and law. One of the key policy considerations is outlined in BLM Instruction Memorandum (IM) WO 2009-141(BLM 2009b), which outlines BLM's commitment to the National Fish Habitat Action Plan that established four goals:

1. Protect and maintain intact and healthy aquatic systems.
2. Prevent further degradation of fish habitats that have been adversely affected.
3. Reverse declines in the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms.
4. Increase the quality and quantity of fish habitats that support a broad natural diversity of fish and other aquatic species.

This programmatic approach is consistent with the National Fish Habitat Action Plan goals and provides managers and the public with a clear understanding of fisheries resource values and their spatial arrangement within the planning area. Management emphasis remains long term, recognizing that short-term impacts may be acceptable as long as they will have discountable or negligible effects on the condition indicators, and will not preclude the long-term improvement of fisheries habitat conditions. If watershed processes are to be restored over time, it is critical that management actions do not individually or cumulatively impact progress toward indicator attainment.

B.1.1. Watershed Categories

Approximately 1,178 sixth-level Hydrologic Unit Code (HUC) Watersheds exist within the Eastern Interior Planning Area. Of these, approximately 520 contain BLM land. The BLM categorized these watersheds into two primary categories: Conservation and Restoration. Approximately 158 watersheds contained only minor amounts of BLM land or no fisheries habitat; therefore these watersheds were excluded from consideration as conservation or restoration watersheds. The BLM categorized the remaining 366 watersheds based on the following:

Conservation watersheds have processes and functions that occur in a relatively undisturbed and natural landscape setting. Hydrologic function, such as sediment amounts and stream flow regimes resulting from disturbance, are within a natural range of frequency, duration, and intensity. Waters are meeting designated or existing beneficial uses. Land uses and human activities do not strongly influence aquatic and hydrologic functions, as indicated by low road density and few stream crossings. Based on these criteria, 347 watersheds were placed in this category.

Management strategies will emphasize natural disturbance regimes, recognizing that active management may be required to conserve physical and biological processes and patterns. For example, road and trail maintenance to minimize erosion and the resulting sediment additions to nearby streams and waterbodies is essential within conservation watersheds.

Restoration Watersheds are those where biological and physical processes and functions do not reflect natural conditions because of past and long-term human-caused land disturbances. The common effects of these disturbances are a long-term (decades) increase of sediment deposition in streams, loss of large woody debris recruitment to stream channels, and abnormal hydrologic patterns (water flows). Additive impacts from human disturbances and periodic natural events, such as large wildland fires, landslides, and floods, exacerbate abnormal watershed and biological conditions. Based on these criteria, 19 watersheds were placed in this category; of these nine are in the Steese Planning Area.

Active management will generally be required to restore the physical and biological function to their natural range of frequency, duration, and intensity. Identifying and assessing the impacts on habitat will allow managers to focus restoration efforts in the most effective manner to achieve hydrologic and biological recovery.

B.1.2. Priority Ranking Factors for Watersheds

To identify the highest resource value aquatic habitats for conservation and restoration, the BLM Alaska developed a priority ranking system. Priority ranking for each conservation or restoration watershed was based on a variety of factors. Primary issues considered in ranking status were priority fish species presence (diversity), resource uses (subsistence and recreation), habitat conditions, and productivity. These ranking criteria and associated point system are outlined below.

Following the evaluation of the 363 sixth-level HUC watersheds, the numeric scores were totaled. The highest scoring watersheds were reviewed by fisheries staff and recommended for consideration as either Riparian Conservation Areas or High Priority Restoration Watersheds during development of the Eastern Interior Resource Management Plan.

Table B-1. Ranking factors for Eastern Interior Watershed Assessment

Value	Definition	Score
Endangered Species Act Aquatic Resources	Federally listed aquatic species are present.	3 Points
Subsistence Fisheries Use Areas	Using the best available information, determine if areas within the watershed include fish subsistence harvest areas.	2 Points
BLM Aquatic Special Status Species (BLM SSS)	Using the best available information, determine if Aquatic (riparian obligate) BLM species of management concern, BLM Alaska sensitive species, or BLM Alaska watch species occur in the watershed.	2 Points
Essential Fish Habitat (EFH) Present or Directly Affected	Using the ADF&G Anadromous Catalog, GIS data, and/or professional knowledge, determine if anadromous species occur in the watershed.	2 Points* *1 point if stream mouth in close proximity to EFH
Fish Species Diversity	Based on reports and/or professional knowledge, determine the number of fish species occurring in the watershed.	1 Species = 1 Point 2-4 Species = 2 Points >5 Species = 3 Points
Watershed Productivity	Fish population or the level of spawning activity is comparatively low or high based on stream size.	1(low)-3(high) Points
Anadromous Species Present	Using the ADF&G Anadromous Catalog GIS data and/or professional knowledge, determine if anadromous species occur in the watershed.	1 Point
Important Recreational Fisheries	Using the best available information, determine if areas within the watershed include important recreational fisheries.	1 Point
Intact/Reference Watershed	Is the watershed unaffected by historic or current land use practices?	1 Point
High Value Habitat Type (spawning/overwintering)	Based on reports and/or professional knowledge, determine if high-value habitats occur in the watershed.	1 Point

Riparian Conservation Areas

Riparian Conservation Areas (RCAs) are specific conservation watersheds that contain the highest fisheries and riparian resource values within the planning area. In these watersheds, riparian-dependent resources receive primary emphasis and management activities are subject to specific standard operating procedures (Appendix A). These areas are designed to be managed using a variety of techniques which may be essential to achieving or maintaining desired riparian and aquatic conditions.

Based on the themes of the alternatives and analysis of the dataset, watershed scores were identified that would dictate the number of proposed RCAs in each alternative of the Proposed RMP/Final EIS. Alternative B and E proposed the highest number of Riparian Conservation Areas, including all conservation watersheds scoring five or more total points. Alternative C proposed a moderate number of Riparian Conservation Areas, including all watersheds scoring eight or more total points. Alternative D proposed the least number of Riparian Conservation Areas, including only those watersheds that scored 11 or more total points. Conservation Watersheds scoring five or more points are listed in the table below and displayed on Map 2.

Table B-2. Ranking of 12th-level hydrologic unit code (HUC) watersheds among 10 ranking factors for the Steese Planning Area

Hydrologic Unit Code No.	Name of 12th-level HUC Watershed	Anadromous	BLM Special Status Species	Subsistence	Recreation	Intact	Watershed Product	EFH	Threatened / Endangered Species	High Value	Diversity	Ranking Sum
190804010207	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804010212	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804020401	McLean Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804010403	Thomas Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804010407	Sheep Creek	1	0	0	0	1	0	2	0	1	2	7
190804010408	Pitkas Bar	1	0	0	1	1	3	2	0	1	3	12
190804010506	Puzzle Gulch	1	0	0	0	1	0	1	0	0	2	5
190804010601	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804010606	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804010903	George Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190804011005	Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190804011009	Ninetyeight Pup-Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190804011102	Headwaters North Fork Preacher Creek	1	0	0	0	1	1	2	0	1	2	8
190804011103	Upper North Fork Preacher Creek	1	0	0	0	1	1	2	0	1	2	8
190804011104	Middle North Fork Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190804011105	Lower North Fork Preacher Creek	1	0	0	0	1	2	2	0	1	3	10

Hydrologic Unit Code No.	Name of 12th-level HUC Watershed	Anadromous	BLM Special Status Species	Subsistence	Recreation	Intact	Watershed Product	EFH	Threatened / Endangered Species	High Value	Diversity	Ranking Sum
190804011201	Loper Creek	0	0	0	0	1	2	1	0	0	2	6
190804011202	Middle Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190705041903	Yukon River[1]	1	0	2	0	1	0	2	0	1	3	10
190705041904	Yukon River[1]	1	0	1	0	1	0	2	0	1	3	9
190705041906	Fourteenmile Creek-Yukon River[1]	1	0	2	0	1	0	2	0	1	3	10

[1] These watersheds overlap both the Steese Planning Area and the Draanjik Planning Area.

Restoration Watersheds

To determine the High Priority Restoration Watersheds, the same process used to identify Riparian Conservation Areas was employed. Based on the limited number of restoration watersheds and the resource values, it was determined that watersheds scoring greater than five points would be considered High Priority Restoration Watersheds across all alternatives. These watersheds are priority areas for active restoration practices. In these areas, management activities will be designed to accelerate the development of self-sustaining, ecologically healthy riparian and aquatic ecosystems.

Using the same ranking process, the remaining restoration watersheds scored less than five points.

Restoration watersheds are listed in the table below and high priority restoration watersheds are displayed on Map 2.

Table B-3. High priority restoration watersheds Steese Planning Area

Hydrologic Unit Code No.	Name of 12th-level HUC Watershed	Anadromous	BLM Special Status Species	Subsistence	Recreation	Intact	Watershed Product	Essential Fish Habitat	Threatened / Endangered Species	High Value	Diversity	Ranking Sum
190804010206	North Fork Birch Creek	1	0	0	1	0	0	2	0	0	3	6
190804010406	Harrison Creek	1	0	0	0	0	0	2	0	0	3	5
190804010205	Twelve-mile Creek	1	0	0		0	0	2	0	0	3	6
190804010306	Volcano Creek-Clums Fork	0	0	0	0	0	1	1	0	0	3	5

Table B-4. Other restoration watersheds Steese Planning Area

Hydrologic Unit Code No.	Name of 12th-level HUC Watershed	Anadromous	BLM Special Status Species	Subsistence	Recreation	Intact	Watershed Product	Essential Fish Habitat	Threatened / Endangered Species	High Value	Diversity	Ranking Sum
190804010208	Fryingpan Creek	0	0	0	0	0	1	1	0	0	2	4
190804010404	South Fork Harrison Creek	0	0	0	0	0	1	0	0	0	2	3
190804010405	North Fork Harrison Creek	0	0	0	0	0	1	0	0	0	2	3
190804011003	Bachelor Creek	0	0	0	0	0	1	0	0	0	2	3
190804010302	Lawson Creek	0	0	0	0	0	0	0	0	0	2	2

B.2. Monitoring and Adaptive Management

B.2.1. Monitoring and Evaluation of the Resource Management Plan

BLM planning regulations require the monitoring and evaluation of resource management plans at appropriate intervals. After approval of the plan and signing of the Record of Decision, an implementation schedule will be completed and will incorporate monitoring plans. Monitoring data will be used to assess resource conditions, identify resource issues and conflicts, determine if resource objectives are met, determine trends for achievement of desired conditions, and periodically refine and update desired conditions and management strategy.

Monitoring is an essential component of natural resource management because it provides information on the relative success of management strategies. The implementation of the resource management plan will be monitored to ensure that management actions follow prescribed management direction (implementation monitoring), meet desired objectives (effectiveness monitoring) and are based on accurate assumptions (validation monitoring).

Monitoring will be coordinated with other appropriate agencies and organizations to enhance the efficiency and usefulness of the results across a variety of administrative units. The approach will build on past and present monitoring work. In addition, specific monitoring protocols, criteria, goals, and reporting formats will be developed.

B.2.2. Adaptive Management

Adaptive management requires knowledge of the current conditions, potential or capability of riparian sites and streams, current management and effects of the management on the resources, and management changes that may be made to move the current condition toward the desired condition. Single indicators of conditions or trend are usually not adequate to make informed decisions. Information on the condition and trend of the vegetation, streambanks, aquatic resources, and knowledge of current management practices can help establish “cause-and-effect” relationships that are important to make appropriate decisions. Such information allows refinement and development of more realistic, locally-derived project or activity design, standards, or criteria.

Monitoring is an integral component of many management approaches, such as adaptive management and ecosystem management. Adaptive management is based on monitoring that is sufficiently sensitive to detect relevant ecological changes. The success of adaptive management also depends on the accuracy and credibility of information obtained through inventories and monitoring. Close coordination and interaction between monitoring and research are important for the adaptive management process to succeed. Data obtained through systematic and statistically valid monitoring can be used by scientists to develop research hypotheses related to priority issues. Conversely, the results obtained through research can be used to further refine the protocols and strategies used to monitor and evaluate the effectiveness of implementing the resource management plan.

Monitoring results will provide managers with the information to determine whether an objective has been met, and whether to continue or modify the management direction. Findings obtained through monitoring, together with research and other new information will provide a basis for adaptive management changes to the plan. The monitoring process and adaptive management share the goal of improving effectiveness and permitting response to increased knowledge and a

changing landscape. The monitoring program will not remain static. The monitoring plan will be periodically evaluated to ascertain that the monitoring questions and standards are still relevant, and will be adjusted as appropriate. Some monitoring items may be discontinued and others may be added as knowledge and issues change

B.2.3. Implementation and Effectiveness Monitoring

The basics of resource management plan-level monitoring will (1) determine if the plan, project, or activities are implemented correctly and are achieving desired results, (2) provide a mechanism for accountability and oversight, (3) evaluate the effectiveness of recovery and restoration efforts, and (4) provide a feedback loop (adaptive management) so that management direction may be evaluated and modified. Management considerations for monitoring include the following:

- Focus monitoring on key questions that inform decision-making and allow adjustments to management.
- Monitoring emphasis and intensity should be commensurate with the importance of the question asked. For example, if adaptive decision-making is used, it will be important to monitor the key parameters to the degree necessary to support the current course of action or to trigger an alternate approach.
- Plan-level monitoring should make use of, and not duplicate, broad-scale monitoring programs. To the extent practicable, monitoring done at the plan scale should be compatible with, and complementary to, broader and finer scale monitoring.
- Monitoring should be coordinated with, and where possible consolidated with, similar efforts of other agencies.
- Outcome-based management approaches rely on monitoring for their success. These approaches typically require a different level and type of monitoring than prescriptive approaches.
- Monitoring commitments in plans should be feasible and achievable.

Monitoring is a process of gathering information through observation and measurement to ensure that project design criteria and mitigation are implemented and to determine if goals and objectives are achieved. The two types of monitoring identified are implementation and effectiveness. Specifics of these types of monitoring are:

- Implementation monitoring is used to determine if management practices are implemented as identified in an activity plan, environmental assessment, environmental impact statement, biological assessment, or biological opinion.
- Effectiveness monitoring is used to determine if management practices, as designed and executed, are effective in meeting project goals and objectives as defined in an activity plan, environmental assessment, environmental impact statement, biological assessment, or biological opinion.

The results of monitoring will be summarized and shared, as requested, with state and federal agencies, Native groups, and other members of the public.

The design criteria and mitigation would be monitored on a specific action or subsample of activity or project. Agency representatives overseeing the actions would do the monitoring, as well as an interdisciplinary or multiparty team, through a combination of any of the following methods:

- Review environmental assessment, biological assessment, and biological opinion identified project specifications and terms and conditions to ensure that monitoring is provided for in contract or plans of operation (project design and mitigation criteria).
- Review project designs and plans of operation; review contract administration reports (daily diaries).
- Review activities on the ground before, during, and after implementation.
- Where appropriate, photograph conditions before projects begin, during implementation, and after completion.

The Eastern Interior Field Office implementation and effectiveness monitoring strategy will include the use of databases and reporting mechanisms. Monitoring protocols will be in accord with appropriate BLM Technical Bulletins or other acceptable monitoring methods which would address the desired conditions and habitat metrics included in the Matrix of Pathways.

Acceptable monitoring methods would be adaptive and include protocols that have been generally approved and accepted by state, federal, and other groups to document existing desired conditions.

B.3. Watershed Conditions Matrix and Effects Checklist

B.3.1. Watershed Condition Matrix

This watershed assessment matrix is adapted from the National Marine Fisheries Service (NMFS 1996) and is linked to the desired future condition for aquatic habitats. This matrix should be used during watershed assessments to determine existing watershed condition ratings. The three condition rating classes are (1) High, (2) Moderate, and (3) Low. The order of the pathways begins with the overall watershed scale indicators at the top and then focuses down through the channel conditions, and finally specific habitat elements.

The purpose of the watershed assessment matrix is to provide a rating for baseline conditions; these may be modified with new information or science that is applicable to conditions occurring in the planning area. This matrix may be updated, modified, or replaced with another watershed assessment tool if new science or new area or watershed resource data indicates changes are needed. For example, the BLM Assessment, Inventory, and Monitoring Program is currently developing predictive models based on data collected across BLM lands in Alaska using a probabilistic sample design. These models will allow the comparison of data from impacted stream segments or watersheds to what would be expected based on natural variability within a pristine watershed. This information will significantly improve the watershed assessment matrix, which depicts the range of desired conditions in a watershed and is shown in Table B-5.

Table B-5. Watershed Assessment Matrix

Pathway	Metric	High Condition	Moderate Condition	Low Condition
Watershed	Watershed road/track density	<1 mile per square mile	1-3 mile per square mile	>3 miles per square mile
Watershed	Streamside road/track density	<1 mile per square mile	1-2 mile per square mile	>2 mile per square mile
Watershed	Riparian vegetation condition	Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is >80%. The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.	Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is 50-79%. The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.	Percent of riparian vegetation in the greenline dominated by late seral community types.
Habitat Elements	Spawning gravel	Surficial fine sediment (< 0.06 mm) is <5%.	Surficial fine sediment (< 0.06 mm) is 5–10%.	Surficial fine sediment (< 0.06 mm) is >10%.
Habitat Elements	Large woody debris	Near-natural levels of acting and potential large wood debris	Acting levels of large wood debris are near-natural, potential levels are below near-natural, or vice versa.	Both acting and potential levels of large wood debris are below near-natural levels.
Habitat Elements	Pool frequency: Channel Width (ft) / No. pools per mile ≤5 / 184 > 5 ≤10 / 96 > 10 ≤15 / 70 < 15 ≥20 / 56 < 20 ≥25 / 47 < 25 ≥50 / 26 < 50 ≥75 / 23 >75	Meets pool frequency occurrence	Meets pool frequency standards but large woody debris recruitment or other pool-creating factors are inadequate to maintain pools over time.	Does not meet pool frequency standards.
Habitat Elements	Pool quality (based on 2008 BLM MIM a methodology or equivalent)	Pool quality rating >80	Pool quality rating 60-80	Pool quality rating <60

Pathway	Metric	High Condition	Moderate Condition	Low Condition
Habitat Elements	Refugium	Adequate habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).	Limited habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).	Inadequate habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).
Habitat Elements	Percent surface fines (< 6 mm)	Rosgen Channel Types A and B ≤ 10%	Rosgen Channel Types A and B = 11-20% C and E = 21-30%	Rosgen Channel Types A and B ≥ 21% C and E ≥ 31%
Channel Condition and Dynamics	Width-to-depth ratio	Rosgen Channel Types A < 10 B < 20 C < 40 E < 7 F < 35 G < 9	Rosgen Channel Types A < 10-12 B < 20-35 C < 40-60 E < 7-9 F < 35-70 G < 9-11	Rosgen Channel Types A > 12 B > 35 C > 60 E > 9 F > 70 G > 11
Channel Condition and Dynamics	Streambank stability	Rosgen Channel Types A and B > 95% C > 90% E = 100%	Rosgen Channel Types A and B 90-95% C = 80-90% E = 95-100%	Rosgen Channel Types A and B < 90% C < 80% E < 95%
Channel Condition and Dynamics	Floodplain connectivity	Off-channel areas are seasonally hydrologically linked to main channel; overbank flows occur in the frequency and magnitude expected for the valley bottom or channel type setting.	Reduced linkage of wetland, floodplains and riparian areas to main channel; overbank flows are reduced or increased relative to historic frequency, as evidenced by moderated aggradation or degradation.	Severe reduction of increase in overbank flows occur relative to the frequency and magnitude expected for the valley bottom or channel type setting; wetland area drastically reduced and riparian vegetation/succession altered significantly.
Water Quality	State Standards (turbidity, temperature, etc.)	Meets all Alaska State Standards	Slight deviation/exceedance from standards; may adversely affect fish aquatic habitat	Slight deviation/exceedance from standards; may adversely affect fish aquatic habitat
Habitat Access	Physical barriers – adults	Any human-made barriers present in watershed allow full upstream and downstream fish passage at all flow (no barrier).	Any human-made barriers present in watershed are a partial barrier to upstream or downstream fish passage.	Any human-made barriers present in watershed are a full barrier to upstream or downstream fish passage at all flows.

Pathway	Metric	High Condition	Moderate Condition	Low Condition
Habitat Access	Physical barriers- juveniles	Any human-made barriers present in watershed allow full upstream and downstream fish passage at all flow (no barrier).	Any human-made barriers present in watershed are a partial barrier to upstream or downstream fish passage.	Any human-made barriers present in watershed are a full barrier to upstream or downstream fish passage at all flows.

B.3.2. Environmental Baseline and Effects Checklist

In concert with the results of the baseline habitat assessment for a given watershed, the following checklist (Table B-6) should be used to determine the effects of site-specific actions on aquatic habitats. These indicators are a suite of metrics that collectively influence aquatic habitat quality and the health of cold-water fish populations. These indicators should not be used individually to determine if a given action should or should not be authorized. This checklist is a decision support tool to aid biologists with impact analysis and the associated identification of appropriate mitigation measures. For some metrics, data may not be available, for other metrics extensive information may exist. A summary rationale associated with each indicator baseline rating and the effect determination should be attached to the completed checklist.

The environmental baseline consists of ratings of high, moderate, or low condition. For the purposes of this checklist, the following definitions apply:

- “Restore” means to change the function of the indicator for the better, or that the restoration rate is increased.
- “Maintain” means that the function of an indicator will not be degraded and the natural rate of restoration for this indicator will not be impaired.
- “Degrade” means to change the function of the indicator for the worse, or that the natural rate of restoration will be impaired.

Table B-6. Checklist for documenting environmental baseline and effects of action(s) on relevant indicators

Pathway Indicator	High Environmental Baseline Condition	Moderate Environmental Baseline Condition	Low Environmental Baseline Condition	Effect of Action: Restore	Effect of Action: Maintain	Effect of Action: Degrade
Watershed Conditions						
Watershed road/track density						
Streamside road/track density						
Riparian vegetation condition						
Channel Conditions						
Width-to-depth ratio						
Streambank stability						
Floodplain connectivity						
Water Quality						
Temperature						
Turbidity						
Habitat Access						
Physical barriers – adults						
Physical barriers- juveniles						
Habitat Elements						
Cobble embeddedness						
Large woody debris						
Pool frequency						
Pool quality						
Refugium						
Percent surface fines						

B.4. Future Watershed Adjustments

Future identification of aquatic species as "special status" (federally listed under the Endangered Species Act or BLM Sensitive) in the planning area would result in an evaluation of specific watersheds used by the species or considered necessary for recovery to determine if additional Riparian Conservation Areas are appropriate. Currently, no watersheds within the planning area are considered to be necessary for the recovery of special status aquatic species. Therefore no Riparian Conservation Areas were identified based on the presence of special status aquatic species.

The intent of this approach to adding future Riparian Conservation Areas is to provide high quality habitat for rare species and support expansion and recolonization of these species to adjacent watersheds. These areas should conserve key processes likely to influence the persistence of populations or metapopulations. Additions to, deletions from, or modifications of special status aquatic species Riparian Conservation Area watersheds would be based on new information, revisions to the BLM Alaska Sensitive Species List, or as species are listed under the Endangered Species Act. In general, these additions would be accomplished through the development of activity plans, such as fisheries habitat management plans, which would outline management goals and objectives. As with other Riparian Conservation Areas, management activities would emphasize achieving or maintaining the riparian and aquatic values, including key processes, for which they are managed.

B.5. Watershed Assessment Process

The purpose of a watershed assessment is to develop and document an understanding of the ecological structures, functions, processes, and interactions occurring at the watershed scale (5th- and 6th-level hydrologic unit code). This process is designed to describe past and current conditions, and develop restoration or management recommendations. The ultimate goal is to provide guidance for management actions that would sustain or improve the health and productivity of natural resources.

B.5.1. Objectives of Watershed Analysis

- Evaluate cumulative watershed effects – watershed analysis enhances the ability to estimate direct, indirect, and cumulative effects of management activities.
- Define watershed restoration needs, goals and objectives (if needed) – provide guidance on the general type, location, and sequence of appropriate activities within a watershed.
- Monitor the effectiveness of watershed protection measures – process for adaptive management feedback loop.
- Provide sufficient watershed context for understanding and carrying out land use activities with a geomorphic context – important tool used in meeting ecosystem management objectives.

B.5.2. Appropriate Methodology

The *Federal Guide for Watershed Analysis—Ecosystem Analysis at the Watershed Scale* Version 2.3 (USFS 1996) was used as a general guide to develop a framework for conducting watershed assessments; however, other processes can be used or developed to satisfy the objectives outlined above. For example, a more rapid watershed assessment process emphasizing remote sensing data

analysis coupled with stream survey data (e.g., riparian condition, stream habitat, water quality, fish species diversity) may optimize assessment efficiency and identify areas requiring more field intensive inventories.

The following six-step process is not issue-driven but focuses on analysis topics, along with specific watershed problems and concerns. This analysis is not a decision making process but will help identify opportunities for future management actions, including planning, project development, and regulatory compliance. Below is a summary the six steps taken to develop an ecosystem analysis at the watershed scale.

Step 1 – Characterization of the Watershed: Identify the dominant physical, biological, and human processes or features of the watershed that affect ecosystem functions or conditions, including the relationship between these ecosystem elements and those occurring in the river basin and/or watersheds. When characterizing the watershed, team members identify the most important land allocations, plan objectives, and regulatory constraints that influence resource management in the watershed.

Step 2 – Identification of Issues and Key Questions: Focus the analysis on the key elements of the ecosystem that are most relevant to the management questions and objectives, human values, or resource conditions within the area.

Step 3 – Description of Current Conditions: Develop more detailed information relevant to the issues and key questions identified in Step 2. Step 3 is where the current range, distribution, and condition of the relevant ecosystem elements are documented.

Step 4 – Description of Reference Conditions: Explain how ecological conditions have changed over time as a result of human influence and natural disturbances. A reference is developed for later comparison with current conditions over the period that the system evolved and with key management plan objectives.

Step 5 – Synthesis and Interpretation of Information: Compare existing and reference conditions of specific ecosystem elements and to explain significant differences, similarities, or trends and their causes. The capability of the system to achieve key management plan objectives is also evaluated.

Step 6 – Recommendations: Identify management recommendations that address resource problems noted in this analysis and then to change the current watershed conditions toward the desired future condition for this area. Recommendations, monitoring needs, and data gaps are identified and described. These are recommendations based on the data currently available. This is an ongoing process and alternative or additional recommendations may be made in the future.

B.6. Recommended Conservation Measures for Essential Fish Habitat

The following are recommended conservation measures for essential fish habitat. These are based on the *Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska, Appendix G - Non-fishing Impacts to Essential Fish Habitat and Recommended Conservation Measures* (NMFS 2005).

B.6.1. Roads and Road Maintenance

1. To the extent practicable, avoid locating roads near fish-bearing streams. Roads should be sited to avoid sensitive areas such as streams, wetlands, and steep slopes.
2. Incorporate appropriate erosion control and stabilization measures into road construction plans to reduce erosion potential.
3. Build bridges when possible. If culverts are used, they should be sized, constructed, and maintained to match the gradient and width of the stream, to accommodate design flood flows, and they should be large enough to provide for migratory passage of adult and juvenile fishes. If appropriate, consider using the culvert guidelines contained in the Alaska Department of Fish and Game and the Alaska Department of Transportation and Public Facilities Fish Pass Memorandum of Agreement, August 2001 online at http://www.adfg.alaska.gov/static/lands/habitatrestoration/fishpassage/pdfs/dot_adfg_fishpass080301.pdf.
4. Locate stream crossings in stable stream reaches.
5. Design bridge abutments to minimize disturbances to stream banks and place abutments outside of the floodplain whenever possible.
6. To the extent practicable, avoid road construction across alluvial floodplains, mass wastage areas, or braided stream bottom lands unless site-specific protection can be implemented to ensure protection of soils, water, and associated resources.
7. Avoid side-casting of road construction and maintenance materials on native surfaces and into streams.
8. To the extent practicable, use native vegetation in stabilization.

B.6.2. Mineral Mining

The following measures are adapted from recommendations in Spence et al. (1996), National Marine Fisheries Service (2004), and Washington Department of Fish and Wildlife (1998). They should be viewed as options to avoid and minimize impacts and promote the conservation, enhancement, and proper functioning of essential fish habitat.

1. To the extent practicable, avoid mineral mining in waters, riparian areas, and floodplains containing essential fish habitat.
2. Schedule necessary in-water activities when the fewest species and least vulnerable life stages of federally managed species will be present.
3. Use an integrated environmental assessment, management, and monitoring package in accordance with state and federal law and regulations. Allow for adaptive operations to minimize adverse effects on essential fish habitat.
4. Minimize spillage of dirt, fuel, oil, toxic materials, and other contaminants into essential fish habitat. Prepare a spill prevention plan if appropriate.
5. Treat wastewater (acid neutralization, sulfide precipitation, reverse osmosis, electrochemical, or biological treatments) and recycle on site to minimize discharge to streams. Test wastewater before discharge for compliance with federal and state clean water standards.
6. Minimize opportunities for sediments to enter or affect essential fish habitat. Use methods such as contouring, mulching, and construction of settling ponds to control sediment

transport. Monitor turbidity during operations, and cease operations if turbidity exceeds predetermined threshold levels. Use methods such as turbidity or sediment curtains to limit the spread of suspended sediments and minimize the area affected.

7. If possible, reclaim rather than bury, mine wastes that contains heavy metals, acid materials, or other toxic compounds, if leachate can enter essential fish habitat through groundwater.
8. Restore natural contours and plant native vegetation on-site after use to restore habitat function to the extent practicable. Monitor the site for an appropriate time to evaluate performance and implement corrective measures if necessary.
9. Minimize the aerial extent of ground disturbance (such as through phasing of operations), and stabilize disturbed lands to reduce erosion.

B.6.3. Sand and Gravel Mining

Individual gravel extraction operations should be judged in the context of their spatial, temporal, and cumulative impacts. Potential impacts to habitat should be viewed from a watershed management perspective. The following recommended conservation measures for sand and gravel mining are adapted from National Marine Fisheries Service (2004) and Oregon Water Resource Research Institute (1995). They should be viewed as options to avoid and minimize impacts and promote the conservation, enhancement, and proper functioning of essential fish habitat.

1. To the extent practicable, avoid sand and gravel mining in waters containing essential fish habitat. Many factors influence site selection for a gravel or sand mining site. Because of the need to incorporate technical, economic, and environmental factors, siting decisions should be considered on a case-by-case basis (U.S. Fish and Wildlife Service 1980).
2. Identify upland or off-channel (where the channel will not be captured) gravel extraction sites as alternatives to gravel mining in or adjacent to essential fish habitat, if possible.
3. Design, manage, and monitor sand and gravel mining operations to minimize potential direct and indirect impacts to essential fish habitat, if operations in essential fish habitat cannot be avoided. This includes, but is not limited to, migratory corridors, foraging and spawning areas, stream and river banks, and intertidal areas.
4. Minimize the areal extent and depth of extraction.
5. Include restoration, mitigation, and monitoring plans, as appropriate in sand/gravel extraction plans.

B.6.4. Oil and Gas Exploration, Development, and Production

As part of pre-project planning, identify all species of concern regulated under federal or state fishery management plans that inhabit, spawn, or migrate through areas slated for exploration, development, or production. Pay particular attention to critical life stages, and develop options that avoid and minimize adverse effects from any associated activities. Modify the project design, timing, or location and use adaptive management.

1. Avoid the discharge of produced waters into marine waters and estuaries. Reinject produced waters into the oil formation whenever possible.
2. Avoid discharge of muds and cuttings into the marine and estuarine environment. Use methods to grind and reinject such wastes down an approved injection well or use onshore disposal wherever possible. When not possible, provide for a monitoring plan to ensure that

the discharge meets Environmental Protection Agency effluent limitations and related requirements.

3. To the extent practicable, avoid the placement of fill to support construction of causeways or structures in the nearshore marine environment.
4. As required by federal and state regulatory agencies, encourage the use of geographic response strategies that identify essential fish habitat and environmentally sensitive areas. Identify appropriate cleanup methods and response equipment.
5. To the extent practicable, use methods to transport oil and gas that limit the need for handling in environmentally sensitive areas, including essential fish habitat.
6. Ensure that appropriate safeguards have been considered before drilling the first development well into the targeted hydrocarbon formations whenever critical life history stages of federally managed species are present.
7. Ensure that appropriate safeguards have been considered before drilling exploration wells into untested formations whenever critical life stages of federally managed species are present. If possible, avoid such work entirely during those time frames.
8. Oil and gas transportation and production facilities should be designed, constructed, and operated in accordance with applicable regulatory and engineering standards.
9. Evaluate impacts to essential fish habitat during the decommissioning phase of oil and gas facilities, including possible impacts during the demolition phase. Minimize such impacts to the extent practicable.

B.6.5. Habitat Restoration/Enhancement

The following recommended conservation measures should be viewed as options to avoid and minimize adverse impacts and promote the conservation, enhancement, and proper functioning of essential fish habitat.

1. Use best management practices to minimize and avoid potential impacts to essential fish habitat during restoration activities. Best management practices should include, but are not limited to, the following:
   a. Use turbidity curtains, hay bales, and erosion mats to protect the water column.
   b. Plan staging areas in advance, and keep them to a minimum size.
   c. Establish buffer areas around sensitive resources; flag and avoid rare plants, archaeological sites, etc.
2. Remove invasive plant and animal species from the proposed action area before starting work. Plant only native plant species. Identify and implement measures to ensure native vegetation or revegetation success.
3. Establish temporary access pathways before restoration activities to minimize adverse impacts from project implementation.
4. Avoid restoration work during critical life stages for fish such as spawning, nursery, and migration. Determine these periods before project implementation to reduce or avoid any potential impacts.

5. Provide adequate training and education for volunteers and project contractors to ensure minimal impact to the restoration site. Train volunteers in the use of low-impact techniques for planting, equipment handling, and any other activities associated with the restoration.
6. Conduct monitoring before, during, and after project implementation to ensure compliance with project design and restoration criteria. If immediate post-construction monitoring reveals that unavoidable impacts to essential fish habitat have occurred, ensure that appropriate coordination with the National Marine Fisheries Service occurs to determine appropriate response measures, possibly including mitigation.
7. To the extent practicable, mitigate any unavoidable damage to essential fish habitat within a reasonable time after the impacts occur.
8. Remove and, if necessary, restore any temporary access pathways and staging areas used in the restoration effort.

Appendix C. Land Tenure and Withdrawals

C.1. Land Tenure

During the land use planning process, the BLM identifies lands for either disposal or retention. Lands are to be retained in federal ownership unless it is determined that disposal of a particular parcel will serve the national interest (Federal Land Policy and Management Act, section 102(a)(1)).

The BLM may dispose of lands through a variety of authorities, provided they meet the criteria in the Federal Land Policy and Management Act. Disposal authorities include (1) exchanges and sales under the Act; and (2) transfers to other governmental units for public purposes. Parcels identified as Zone 3 in this Approved RMP are those that are potentially suitable for disposal through public land sales.

Lands identified as Zone 2 are potentially suitable for exchange. Land exchanges are a tool that enables the BLM and other landowners to improve land management, consolidate ownership, and protect environmentally sensitive areas. By exchanging public land that is isolated and difficult to manage, the BLM is able to acquire other lands with importance for recreation, wildlife, fisheries, wetlands, habitat for threatened and endangered species, wilderness, open space, scenic, cultural and other resource conservation purposes. Land exchange allows the BLM to reposition lands into more manageable units and to meet community expansion needs.

Even though land use plans identify lands for potential disposal, the BLM must still complete many procedural requirements before these lands can be for sale or exchange. These processes and legal requirements can be costly and time-consuming. In some cases, the process can result in a decision not to dispose of the public lands. The BLM will make a final determination on suitability for disposal when there is actually a proposal to implement a disposal action under this Record of Decision and Approved RMP.

C.1.1. Land Tenure Adjustment Criteria

In accordance with the Federal Land Policy and Management Act and other laws, Executive Orders, and Departmental and BLM policies, the BLM will consider the following factors when evaluating opportunities for disposal or acquisition of lands or interests in lands. This list is not all inclusive, but represents the major factors to consider.

General Land Tenure Adjustment Evaluation Factors

- Improves manageability of specific areas
- Maintains or enhances important public values and uses
- Consolidates federal mineral estate or reunites split surface and mineral estates
- Facilitates development of energy and mineral potential
- Reduces difficulty or cost of public land administration
- Provides access to land for public recreation and other uses
- Amount of public investments in facilities or improvements and the potential for recovering those investments
- Suitability of land for management by another federal agency

- Significance of decision in stabilizing or enhancing lifestyles, business, social, and economic conditions
- Meets long-term public management goals
- Facilitates national, state, and local BLM priorities or mission statement needs
- Consistent with cooperative agreements and plans or policies of other agencies
- Facilitates implementation of other aspects of the approved resource management plans

Acquisition Criteria

- Secures lands adjacent to other Zone 1 lands
- Facilitates access to public land and resources retained for long-term public use
- Secures threatened or endangered or sensitive plant and animal species habitat
- Protects riparian areas and wetlands
- Contributes to biodiversity
- Protects high-quality scenery
- Enhances the opportunity for new or emerging public land uses or values
- Facilitates management
- Protects significant cultural resources and sites eligible for inclusion on the National Register of Historic Places
- Provides land for BLM administrative sites

Disposal Criteria

- Lands of limited public value
- Widely scattered parcels that have no significant values and are difficult for the BLM to manage beyond custodial administration
- Lands with high public values for proper management by other federal agencies, or by state and local governments
- Land that would aid in aggregating or repositioning other public lands or public land resource values, where the public values to be acquired outweigh the public values to be exchanged

C.1.2. Zone Definitions

Zone 1 – Retention and Acquisition

Retain lands in Zone 1 under BLM administration. Consider acquisition of inholdings in Zone 1 areas, from willing landowners, using the appropriate acquisition authority. Acquired lands would be managed the same as surrounding lands after acquisition. Lands in Zone 1 include:

- National Landscape Conservation System designated lands
- National Recreation Areas
- National Recreation Trails

- Areas of critical environmental concern
- Research natural areas
- Developed recreation and administrative sites
- Designated critical habitat for threatened or endangered species
- Riparian conservation areas
- Most of Draanjik subunit, exclusive of Circle lands

Zone 2 – Suitable for Consolidation

Lands in Zone 2 will be available for acquisition and disposal, including exchange, to enhance public resource values, improve management capabilities, or reduce the potential for land use conflict. For example: Isolated parcels may result from Native- and State-selected lands that are not conveyed and lands relinquished under withdrawal by federal agencies. Zone 2 lands consist of all lands not listed in the descriptions of Zone 1 and Zone 3 lands.

Zone 3 – Suitable for Disposal

Lands in Zone 3 will be available for disposal.

- Lands that are either not practical to manage, or are uneconomical to manage (because of their intermingled location and nonsuitability for management by another federal agency).
- Federal mining claims that are outside of Zone 1 lands and outside of large blocks of BLM-managed lands that become null and void (mining claims that are surrounded by large blocks of state land and thus difficult to manage).
- Survey hiatuses (gap or space unintentionally left, when describing adjoining parcels of land).
- Encroachments (trespass or intrusion onto another's property).
- Lands subject to Public Land Order 1613 (Alaska highway right-of-way adjustments).
- Reserved federal interests in split-estate lands may be considered for conveyance out of federal ownership.

C.2. Withdrawals

Virtually all of BLM-managed lands within the planning area are under some type of withdrawal pursuant to the Alaska Native Claims Settlement Act (ANCSA), Alaska National Interest Lands Conservation Act (ANILCA), the Wild and Scenic Rivers Act, or some other federal law. Some areas are covered by multiple withdrawals. The BLM reviews all withdrawals and makes recommendations in the resource management plan to retain, modify, or revoke withdrawals.

Section 3.3.8 of the Proposed RMP/Final EIS provides more background information on existing withdrawals. The purpose of this Appendix is to provide a more in depth discussion for some of the withdrawals and the process for modifying or revoking these withdrawals. There are two primary types of withdrawals: public land orders issued by the Secretary of the Interior and legislative withdrawals implemented by Congress through legislation.

The Alaska Native Claims Settlement Act authorized the Secretary of the Interior (Secretary) to withdraw and reserve public lands for study and classification. This was done through a series of

public land orders issued between 1972 and 1975. These are referred to as ANCSA 17(d)(1) withdrawals. The public land orders generally closed the lands to all forms of appropriation under public laws, including mining and mineral leasing. The withdrawals kept the lands unencumbered for selection by ANCSA corporations, and prevented the creation of new third-party interests that would interfere with land conveyance. The withdrawals also allowed the BLM time to study and classify the lands.

Portions of six 17(d)(1) withdrawals cover lands in the Eastern Interior Planning Area. All of the public land orders close lands to the mineral leasing laws. Some close the lands to all types of mining. Others close the lands to mining for non-metalliferous minerals, but allow for metalliferous mining.

Additionally, most of these 17(d)(1) public land orders were modified several times. The modifications generally opened lands to state selection, or added additional lands to the withdrawal. One other withdrawal of note, Public Land Order 5150 for a utility corridor (the Trans-Alaska Pipeline), covers land in the Wickersham Dome area, just outside of the White Mountains National Recreation Area. That public land order closes these lands to non-metalliferous mining, mineral leasing, and State or Native selection.

In addition to the 17(d)(1) withdrawals, some lands in the planning area are withdrawn from the mining laws by legislation. Subject to valid existing rights, section 402(b) of the Alaska National Interest Lands Conservation Act withdraws the Steese National Conservation Area from location, entry, and patent under U.S. mining laws. Subject to valid existing rights, section 1312(b) withdraws the White Mountains National Recreation Area from State selection under the Alaska Statehood Act or other law, and from location, entry, and patent under U.S. mining laws. Lands within one-half mile of Birch Creek Wild and Scenic River, Beaver Creek Wild and Scenic River, and the wild segments of the Fortymile Wild and Scenic River, are also withdrawn under the Wild and Scenic Rivers Act, pursuant to the Alaska National Interest Lands Conservation Act. These legislative withdrawals overlap the 17(d)(1) withdrawals.

Modifying or revoking the 17(d)(1) withdrawals would open some lands in the planning area to mineral leasing and mining of various types of locatable minerals. In some areas however, lifting the 17(d)(1) withdrawals would not have an immediate effect. Lands selected by the Alaska Native Claims Settlement Act corporations and the State of Alaska would remain "segregated" (unavailable) to mineral leasing or locatable mineral entry (staking of mining claims). If the selections in these areas are relinquished, the lands would then be available for location. Additionally, the White Mountains National Recreation Area, the Steese National Conservation Area, and some lands within wild and scenic river corridors are withdrawn from mineral entry pursuant to the Alaska National Interest Lands Conservation Act (ANILCA). In most cases the ANILCA withdrawals apply to public lands that are also subject to 17(d)(1) withdrawals. In areas withdrawn pursuant to the ANILCA, removal of the 17(d)(1) withdrawals could result in opening the area to leasable minerals, but would not open it to locatable minerals unless Congress modifies the ANILCA withdrawal to allow for location.

A common misconception is that a withdrawal is needed to close lands to leasable minerals. The BLM can close lands to leasable minerals through a land use plan decision. Withdrawals are only needed to close lands to location and entry for locatable minerals under the Mining Law of 1872. Because the Alaska Native Claims Settlement Act 17(d)(1) public land orders closed lands to leasing under the Minerals Leasing Act of 1920, any planning recommendations to open areas to leasing do not become immediately effective and will require the revocation or modification of the withdrawal. Revocation or modification orders are signed by the Secretary of the Interior.

Table C-1. Existing mineral withdrawals in the Steese Planning Area and process for change

Type of Withdrawal	Authorization	Description	Effect	Process for Change
Secretarial 17(d)(1)	PLO 5180 – White Mountains NRA and Steese National Conservation Area	Withdrawal for Classification and for Protection of Public Interest in lands; amended by PLOs 5193, 5242, 5250, 5251, 5254, 5257, 5321, 5391, 5418, 5657, 6092.	Subject to valid existing rights, closes described lands to location and entry under the mining laws (except for location of metalliferous minerals) and to leasing under the mineral leasing laws.	To open described lands to public land laws, the Secretary of the Interior issues a new PLO (which partially revokes the existing PLO) and opening order; The new PLO becomes effective the date of publication in the *Federal Register*. The Final EIS associated with the RMP provides NEPA compliance for the revocation order/opening order. No additional public notification is required.
Secretarial 17(d)(1)	PLO 5186 – Fairbanks area	Withdrawal for Classification and Protection of Public Interest in Lands Not Selected by State. Amended by PLOs 5254, 5242, and 5776.	Subject to valid existing rights, closes described lands to location and entry under the mining laws (except for location of metalliferous minerals) and to leasing under the mineral leasing laws.	See Process for Change in first row.
Secretarial 17(d)(1)	PLO 5179 – Birch, Beaver, and Fortymile WSR corridors, plus additional lands.	Withdrawal in Aid of Legislation concerning addition to or creation of conservation units (wild and scenic rivers); modified by PLOs 5192, 5250, 5251, 5257, 5254, 5657, and 6092.	Subject to valid existing rights, closes described lands to location and entry under the mining and to leasing under the mineral leasing laws.	See Process for Change in first row.
Secretarial 17(d)(1)	PLO 5184 – lands around Circle, AK	Withdrawal for Classification or Reclassification of some areas withdrawn by section 11 of ANCSA	Subject to valid existing rights, closes described lands to location and entry under the mining and to leasing under the mineral leasing laws.	See Process for Change in first row.
Congressional	ANILCA 402(b) 43 U.S.C. 1716(b)	Withdraws Steese National Conservation Area	Subject to valid existing rights, withdraws lands from location, entry, and patent under U.S. mining laws; where consistent with land use plan mineral development may be permitted under the Minerals Leasing Act or the Minerals Materials Act. No federal lands shall be transferred out of public ownership except by exchange pursuant to FLPMA.	Secretary can modify to open lands to entry, location, and patent under the U.S. mining laws. Changes would be made through a PLO and opening order, similar to the process for 17(d)(1)

Type of Withdrawal	Authorization	Description	Effect	Process for Change
Congressional	ANILCA 606(a)(2) 16 U.S.C. 1285b	Amends section 15 of the Wild and Scenic Rivers Act to withdraw lands within ½ mile of bed and banks of Beaver Creek and Birch Creek WSR; and lands within ½ mile of bed and banks of wild segments of the Fortymile WSR.	Subject to valid existing rights, withdraws lands from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including amendments thereto.	Only Congress can open lands to prohibited activities.

ANILCA = Alaska National Interest Lands Conservation Act; PLO = public land order; WSR = Wild and Scenic River; FLPMA = Federal Land Policy and Management Act; ANCSA = Alaska Native Claims Settlement Act; U.S.C. = United States Code.

C.2.1. Process for Withdrawal Revocation

After a Record of Decision recommending revocation for one or more public land orders is issued, the BLM would follow the general process outlined below to implement the revocation. In most cases, it would be a partial revocation as these public land orders extend beyond the planning area boundaries and the Record of Decision only addresses those portions of the public land orders within the planning area. After the Record of Decision is issued, no further public notice is required to proceed with the revocation. The Proposed RMP/Final EIS covers the environmental impacts of opening lands to the public land laws and provides compliance with the National Environmental Policy Act.

The revocation is affected by issuing a new public land order, which either replaces the existing public land order or amends it. As part of this new public land order, an opening order is also issued. Once approved by the Secretary, this combination of a new public land order and opening order opens the lands described in the public land order to the referenced public land laws. The following steps outline the process:

1. BLM Alaska drafts a new public land order including a legal land description that describes the areas where the existing public land order would be revoked. Land descriptions are separated into paragraphs describing the action (such as opening lands to Federal Land Policy and Management Act sales, mineral leasing laws, or the Mining Law of 1872) that would apply to each legal description.
2. BLM Alaska submits this public land order/opening order and related documents through the Director of the BLM to the Secretary of the Interior for review and approval. Related documents include pertinent portions of the administrative record for the Eastern Interior Resource Management Plan, such as the section 810 analysis.
3. The Secretary's Office reviews the public land order package and submits it to the Secretary for signature.
4. Once signed, the public land order and opening order are published in the *Federal Register*. The actions take effect on the publication date of the public land order.
5. If any of the lands opened by the new public land order are selected by the State or Native corporations, these lands would remain closed until the selections were relinquished or the lands conveyed.

C.2.2. Modifying Legislative Withdrawal Steese National Conservation Area

Section 402(b) of the Alaska National Interest Lands Conservation Act withdraws the Steese National Conservation Area from location, entry, and patent under U.S. mining laws, but also authorizes the Secretary to open such lands through the planning process. Under Alternatives C and D of the Proposed RMP/Final EIS, the BLM recommended that the Secretary open portions of the Conservation Area to mineral location and entry. The process of opening the Conservation Area would be similar to that described above for revocation of 17(d)(1) withdrawals, but is a moot point because the BLM's final decision is to not open the National Conservation Area. The Conservation Area is also covered by 17(d)(1) withdrawals, Public Land Order 5180 and Public Land Order 5179. The record of decision recommends these public land orders be partially revoked to remove duplicate withdrawals in the Conservation Area and clean up the land record.

C.2.3. Process for New FLPMA Withdrawals

The Record of Decision and Approved RMP for the Steese Planning Area recommends new withdrawals from mineral location and entry to protect resources (Map 8). The BLM will follow a separate withdrawal process to implement these decisions. The requirements for the withdrawal process are covered at 43 CFR 2300 and involve filing a petition/application with the Secretary of the Interior and the completion of reports and studies, including a mineral potential report. In Alaska, any new withdrawals over 5,000 acres are subject to section 1326 of the Alaska National Interest Lands Conservation Act, which states:

> ...the President or the Secretary may withdraw public lands in the State of Alaska exceeding five thousand acres in the aggregate, which withdrawal shall not become effective until notice is provided in the Federal Register and to both Houses of Congress. Such withdrawal shall terminate unless Congress passes a joint resolution of approval within one year after the notice of such withdrawal has been submitted to Congress.

New withdrawals would not be needed in the Steese National Conservation Area as this area is withdrawn from mineral location and entry by the Alaska National Interest Lands Conservation Act (ANILCA). However, small withdrawals of lands adjacent to the National Conservation Area and Birch Creek are recommended. In Birch Creek the ANILCA withdrawal from mineral entry and location extends one-half mile from the bed and banks of the river. In some areas the designated corridor is wider than the one-half-mile withdrawal. In these areas new Federal Land Policy and Management Act withdrawal from mineral location and entry of any lands within the designated corridor that are not withdrawn by the ANILCA is recommended. Also riparian conservation areas along Birch Creek are recommended for withdrawal from mineral entry and location to protect fisheries and aquatic habitat.

Table C-2. Process for New Federal Land Policy and Management Act (FLPMA) Withdrawals

Authority	Description	Effect	Process for Change
FLMPA 204	New withdrawals from mineral location and entry under FLPMA are recommended in this Approved Resource Management Plan. Alaska Native Claims Settlement Act withdrawals would be retained until new withdrawals are in effect (approved by Congress). FLPMA withdrawals are subject to review and renewal every 20 years.	Withdraw lands from location and entry under U.S. mining law.	Secretary of the Interior approves public land order withdrawing lands; Published in *Federal Register*, if over 5,000 acres submitted to Congress; Terminates if Congress does not approve within one year of notification.

C.2.4. Recommendations to the Secretary

Revocation of all 17(d)(1) withdrawals is recommended, but in some areas revocation would be delayed until the new withdrawal is in place. Recommended withdrawal acres in the following table are estimated through Geographic Information Systems data and generally rounded to the nearest 1,000 acres. Acres may change before any withdrawal recommendations are implemented because the BLM will continue to convey land to the State and Native corporations in the planning area until land entitlements are met. Additionally, the BLM's withdrawal database used to calculate these acreages has some errors.

Table C-3. Withdrawal recommendations to the Secretary of the Interior

Action	Approved Steese RMP
Recommend new FLPMA withdrawals	25,000 acres
Recommend partial revocation ANCSA 17(d)(1) withdrawals affecting the planning area	28,000 acres outside of the Steese National Conservation Area and 1,213,000 acres within the Steese National Conservation Area and Birch Creek

FLPMA = Federal Land Policy and Management Act; ANCSA = Alaska Native Claims Settlement Act; PLO = public land order; WSR = Wild and Scenic River

Appendix D. Bird Species of Conservation Concern

The Eastern Interior Field Office compiled the following list of bird species of conservation concern during development of the Eastern Interior Proposed RMP and Final EIS. This list applies to the entire Eastern Interior Planning Area and was not revised for the Steese Planning Area. This list will change over time as the various agencies and organizations update their lists and as more knowledge is gained on the distribution of species of conservation concern in Alaska.

Table D-1. Bird species of conservation concern in the Eastern Interior Planning Area

Bird Species	BLM Alaska Sensitive Species[a]	USFWS Birds of Conservation Concern[b]	Alaska State Wildlife Conservation Strategy Featured Species[c]	Boreal Partners in Flight Priority Species[d]	Shorebird and Waterfowl Conservation Plans[e]
Gray-cheeked Thrush	N/A	N/A	N/A	**Priority**	N/A
Olive-sided Flycatcher	**Sensitive**	N/A	**featured**	**Priority**	N/A
Trumpeter Swan	**Sensitive**	N/A			N/A
Blackpoll Warbler	**Sensitive**	N/A	**featured**	**Priority**	N/A
Townsend's Warbler	N/A	N/A	**featured**	**Priority**	N/A
American Peregrine Falcon	N/A	**BCR4**	**featured**	N/A	N/A
Golden Eagle	**Sensitive**	N/A	N/A	N/A	N/A
Buff-breasted Sandpiper	N/A	N/A	**featured**	N/A	**Priority**
Smith's Longspur	N/A	N/A	**featured**	**Priority**	N/A
Rusty Blackbird	**Sensitive**	N/A	**featured**	**Priority**	N/A
Solitary Sandpiper	N/A	**BCR4**	**featured**	N/A	**Priority**
Short-billed Dowitcher[f]	N/A	**BCR4**	N/A	N/A	**Priority**
Hudsonian Godwit[f]	N/A	**BCR4**	N/A	N/A	**Priority**
Short-eared Owl	**Sensitive**		**featured**	N/A	
Arctic Tern	N/A		**featured**	N/A	**High Risk**
Whimbrel[f]	N/A	**BCR4**	N/A	N/A	**Priority**
Horned Grebe	N/A	**BCR4**	N/A	N/A	
Lesser Yellowlegs	N/A	**BCR4**	N/A	N/A	**Priority**
Upland Sandpiper	N/A	**BCR4**	N/A	N/A	**Priority**
American Golden Plover	N/A	N/A	N/A	N/A	**Priority**
Surfbird	N/A	N/A	N/A	N/A	**Priority**

Bird Species	BLM Alaska Sensitive Species[a]	USFWS Birds of Conservation Concern[b]	Alaska State Wildlife Conservation Strategy Featured Species[c]	Boreal Partners in Flight Priority Species[d]	Shorebird and Waterfowl Conservation Plans[e]
Mallard	N/A	N/A	N/A	N/A	**High Priority**
Lesser Scaup	N/A	N/A	N/A	N/A	**High Priority**
Northern Pintail	N/A	N/A	N/A	N/A	**High Priority**
American Wigeon	N/A	N/A	N/A	N/A	**Mod.High Priority**
Canvasback	N/A	N/A	N/A	N/A	**Mod.High Priority**
Redhead	N/A	N/A	N/A	N/A	**Mod.High Priority**
Common Goldeneye	N/A	N/A	N/A	N/A	**Mod.High Priority**
Long-tailed Duck	N/A	N/A	featured	N/A	**Mod.High Priority**
Black Scoter	N/A	N/A	N/A	N/A	**Mod.High Priority**
White-winged Scoter	N/A	N/A	N/A	N/A	**Mod.High Priority**
Surf Scoter	N/A	N/A	N/A	N/A	**Mod.High Priority**
Gyrfalcon	N/A	N/A	N/A	**Priority**	N/A
Sharp-tailed Grouse	N/A	N/A	N/A	**Priority**	N/A
American Dipper	N/A	N/A	N/A	**Priority**	N/A
Northern Shrike	N/A	N/A	N/A	**Priority**	N/A
White-winged Crossbill	N/A	N/A	N/A	**Priority**	N/A
Bohemian Waxwing	N/A	N/A	N/A	**Priority**	N/A
Black-backed Woodpecker	N/A	N/A	N/A	**Priority**	N/A
Boreal Owl	N/A	N/A	N/A	**Priority**	N/A
Varied Thrush	N/A	N/A	N/A	**Priority**	N/A
Hammond's Flycatcher	N/A	N/A	N/A	**Priority**	N/A
Great Gray Owl	N/A	N/A	N/A	**Priority**	N/A
Golden-crowned Sparrow[f]	N/A	N/A	N/A	**Priority**	N/A

a. Species listed by the BLM Alaska State Director as BLM sensitive species.
b. Species listed as a Bird of Conservation Concern in Bird Conservation Region 4 (interior AK) (BCR4).
c. Species listed in the Alaska State Wildlife Conservation Strategy (SWCS) as a featured species.
d. Species listed by the Alaska Boreal Partners in Flight as Priority Species in AK.
e. Alaska Shorebird Conservation Plan Priority Species, Waterbird Conservation Plan for the Americas High Risk Species, or North American Waterfowl Management Plan High or Moderately High Continental Priority Species.
f. Not likely found in planning area in significant numbers.

Appendix E. Outstandingly Remarkable Values for Birch Creek Wild and Scenic River

E.1. Introduction

The following text is excerpted from the Appendix E of the Eastern Interior Proposed RMP/Final EIS, Wild and Scenic Rivers Inventory (BLM 2016).

The following sections describe the outstandingly remarkable values for wild and scenic rivers designated by the Alaska National Interest Lands Conservation Act. The Steese Approved RMP identifies the outstandingly remarkable values for Birch Creek Wild and Scenic River. Outstandingly remarkable values are typically identified in a study prior to the designation, but the Birch Creek Wild and Scenic River was designated by the Alaska National Interest Lands Conservation Act without these specific values identified by Congress. In these cases, managers typically develop outstandingly remarkable values from study reports and other documentation of management activities and intentions as well as incorporating current data and expertise.

Outstandingly remarkable values are defined by the Wild and Scenic Rivers Act as those characteristics that make the river worthy of special protection. These can include scenery, recreation, fish and wildlife, geology, history, culture, and other similar values, which are to be considered in determining eligibility for wild and scenic river designation. The Act states:

> Each component of the National Wild and Scenic Rivers System shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values.

E.2. Methodology

Section 1(b) of the Wild and Scenic Rivers Act requires that, in order for a river segment to be eligible for inclusion as a component of the National Wild and Scenic Rivers System, it must possess one or more of the following outstandingly remarkable values: scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. More specific guidance on identifying outstandingly remarkable values is provided by the Interagency Wild and Scenic Rivers Council (IWSRC) and BLM Manual 6400.

The following is a summary of the guidance by the IWSRC in "*A Compendium of Questions and Answers Relating to Wild and Scenic Rivers*," May, 1997 online at www.rivers.gov. An outstandingly remarkable value must be river-related; to be considered river-related, a value must:

- be located in the river or on its immediate shorelines – within one-quarter mile on either side of the river; and,
- contribute substantially to the functioning of the river ecosystem; or,
- owe its location or existence to the presence of the river.

The value must be rare, unique, or exemplary in a regional or national context. To be considered rare or unique, a value should be a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary.

The following standards guide how these values are to be interpreted and applied on BLM-managed lands. State Directors may (normally as an element of guidance for resource management planning) prescribe supplemental standards or criteria for determining outstandingly remarkable values as they apply to particular river segments. BLM Manual 6400 provides standards to guide how outstandingly remarkable values are interpreted and applied. These are described below.

1. **Scenery**. The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. BLM Visual Resource Inventory Handbook, H-8410-1, may be used in assessing visual quality and in evaluating the extent of development upon scenic values. The rating area must be scenic quality "A" as defined in BLM Visual Resource Inventory Handbook. When analyzing scenic values, additional factors, such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse along the majority of the river or river segment.
2. **Recreation**. Recreational opportunities within the subject river corridor are, or have the potential to be, popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare within the region. River-related opportunities include, but are not limited to, sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Such a recreational opportunity may be an outstandingly remarkable value without the underlying recreational resource being an outstandingly remarkable value (for example, fishing may be an outstandingly remarkable value without the fish species being an outstandingly remarkable value). The river may provide settings for national or regional usage or competitive events.
3. **Geology**. The river area contains one or more examples of a geologic feature, process, or phenomenon that is unique or rare within the region of comparison. The feature(s) may be in an unusually active stage of development, represent a “textbook” example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic features).
4. **Fish**. Fish values include either indigenous fish populations or habitat or a combination of these river-related conditions.
    a. Populations. The river is nationally or regionally an important producers of indigenous resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state, listed, or candidate, threatened, endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.
    b. Habitat. The river provides exceptionally high quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.
5. **Wildlife**. Wildlife values include either terrestrial or aquatic wildlife populations or habitat or a combination of these river-related conditions.
    a. Populations. The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species dependent on the river environment. Of particular significance are species considered to be unique to

the area and/or populations of federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.

b. Habitat. The river, or area within the river corridor, provides exceptionally high-quality habitat for wildlife of national or regional significance and/or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.

6. **Historical**. The river, or area within the corridor, has scientific value or contains a rare or outstanding example of a district, site, building, or structure that is associated with an event, person, or distinctive style. Likely candidates include sites that are eligible for the National Register of Historic Places at the national level or have been designated a national historic landmark by the Secretary of the Interior.

7. **Cultural**. The river, or area within the river corridor, contains rare or outstanding examples of historic or prehistoric locations of human activity, occupation, or use, including locations of traditional cultural or religious importance to specified social and/or cultural groups. Likely candidates might include a unique plant procurement site of contemporary significance.

8. **Other Similar Values.** While no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of additional river-related values consistent with the foregoing guidance may be developed as part of the eligibility process, including, but not limited to, hydrological and paleontological resources or scientific study opportunities. By way of example, the following evaluation guidelines describe possible river-related botanical resources:

> Botany. The area within the river corridor contains riparian communities that are ranked critically imperiled by state-based natural heritage programs. Alternatively, the river contains exemplary examples, in terms of health, resilience, species diversity, and age diversity, of more common riparian communities. The river corridor may also contain exemplary and rare types of ecological refugia (palm oases) or vegetation habitats (hanging gardens or rare soil types) that support river related species. The river may also contain river-related plant species that are listed as threatened or endangered by the U.S. Fish and Wildlife Service or appear on the BLM's sensitive species list.

E.3. Historical Review of Birch Creek

Proposed Birch Creek Wild and Scenic River Final Environmental Statement: This document was prepared by the Alaska Planning Group of the U.S. Department of the Interior in 1975 and addressed the impact of designating a portion of Birch Creek as a component of the National Wild and Scenic Rivers System. Specific values of the river were discussed in the section "Description of the Environment," however no formal determination of ORVs was made. The document reviewed 135 miles of the 314 mile-long Birch Creek.

Pertinent statements on the values of the river in the Environmental Statement include:

> "Spectacular schist examples are found along the river in rock outcroppings and on adjacent hillsides where sheer rock walls have resisted the erosive action of the water.

> These outcropping and coloration of the exposed bedrock are of outstanding interest to the layman as well as the geologist." (page 30)
>
> "The area adjacent to the lower 35 miles of the proposed Wild River Area has been identified by the Alaska Department of Fish and Game, in the publication Alaska's Wildlife and Habitat, as a significant waterfowl molting and nesting area for lesser scaup, pintails, widgeons, mallards, green-winged teals, white-winged scoters, buffleheads, American goldeneyes, canvasbacks, and shovelers. Trumpeter swans also may nest in the area. Canada and white-fronted geese and little brown cranes are common in the wet muskeg areas." (page 41)
>
> "The American peregrine falcon (Falco peregrines anatum) is known to nest along Birch Creek. As the peregrine falcon is a threatened species (Threatened Wildlife of the United States, 1973), the nesting sites found along Birch Creek cliffs are considered quite significant." (page 41)
>
> "Other area wildlife of special interest are the timber wolf and American osprey." (page 41)
>
> "Birch Creek offers outstanding recreational opportunities for non-motorized 'float-boat' use for the experienced canoeist (canoeing, kayaking, rafting). It is one of the very few clearwater rivers in the State with road access at two points on an otherwise undisturbed river segment. The recreationist is offered a wilderness experience along the river without having to pay the high costs of aircraft transportation—a unique proposition in Alaska." (page 48)

A Proposal for Protection of Eleven Alaskan Rivers, Final Environmental Statement: This document was prepared by the Department of the Interior Heritage Conservation and Recreation Service, June 1980. It evaluates the impact of protecting the natural environment within a four-mile corridor along eleven rivers in Alaska, including Birch Creek. No specific values were noted for Birch Creek.

Alaska National Interest Lands Conservation Act (ANILCA) December 1980: Congress established the Birch Creek WSR in ANILCA Section 603 in which the Wild and Scenic River Act was amended to add the following paragraph:

> "Birch Creek, Alaska: The segment of the main stem from the south side of the Steese Highway in township 7 north, range 10 east, Fairbanks meridian, downstream to the south side of the Steese Highway in township 10 north, range 16 east, to be administered by the Secretary of the Interior."
>
> ANILCA designated Birch Creek as a "wild" pursuant to the Wild and Scenic Rivers Act. The values of the river were not discussed. ANILCA further directed the Secretary of the Interior to establish detailed boundaries and to prepare a management and development plan.

Birch Creek River Management Plan: This document was prepared by the BLM and USFWS, December 1983. It determined the detailed boundaries for the river corridor and established a management and development plan. While values in the river corridor were discussed, ORVs were not determined.

Pertinent statements on the values of the river in the River Management Plan include:

> "Birch Creek provides for a wide variety of primitive-based recreation opportunities…. Attractive, natural campsites are abundant along the river, including the many gravel bars

as well as upland forested areas. Birch Creek is easily accessible from Fairbanks via the State-maintained Steese Highway." (page 8)

"Scenic viewing opportunities are one of the region's most valuable recreational resources. Occasional cliffs and outcroppings of bedrock contrast with the green mosaic formed by surrounding vegetation on low rolling hills." (page 8)

"A portion of the Circle to Fairbanks Historic Gold Rush Trail, which has been submitted for nomination to the National Register of Historic Places, passes through the river corridor." (page 23). Note: Upon subsequent review, it was determined that this trail does not pass through the river corridor.

E.4. Findings for Birch Creek

The following paragraphs evaluate the scenic, recreational, geologic, fish, wildlife, cultural, historic, and other values for Birch Creek Wild and Scenic River. See section E.2 Methodology for a description of BLM criteria used to interpret these values.

Scenic

Evaluation of Present Situation

The Birch Creek WSR Corridor lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's VRM process. See Appendix D Visual Resource Inventory of the Eastern Interior Proposed RMP/Final EIS.

The upper reach of Birch Creek flows through a narrow winding canyon with birch and spruce upland. A boater's focus is on the water course of riffle-pools with small rapids emptying into shallow pools; there are opportunities, however, for glimpses of historic structures in an otherwise natural landscape. Some shallow gravel bars offer contrast with the water and upland vegetation.

At the confluence with Harrington Creek the river changes character as the channel widens with a backdrop of low rounded hills and mountains. Short sections of rapids over a an eight-mile stretch through outcropping bedrock create contrast with the water and the varied vegetation types which include white and black spruce, birch and aspen, alpine tundra and black spruce bog uplands.

Gravel bars are larger and higher with willow and alder shrubs and congregations of large debris along point bars creating unique visual points of interest. Upland banks are also higher in many stretches with four-to-six foot drops to water level. There are more opportunities to glimpse historic cabins and hike to higher elevations for outstanding views of the river system.

The lower section of Birch Creek enters the Yukon Flats where the river valley widens to miles and the river meanders with numerous channels with broad gravel bars. Cliff areas with ice lenses and loess soils are evident along this lower stretch. There are also unique areas where trees have lodged along the river bed in mid channel and create a bone-yard effect. Diverse vegetative types such as closed spruce forest, open low-growing spruce, and treeless bog offers distinctive contrast between the water, gravel bars and uplands creating unique views and changing views along Birch Creek. The river again approaches the foothills with a more confined meandering channel with oxbows and sloughs before it finally breaks free into the flats. The viewshed is confined again with small cliff-like banks.

Finding

The changes in topography from a headwater stream to a more mature river with meander bends and braided systems add diversity to a relatively short river segment. The eight-mile stretch of intermittent extruding bedrock with interspersed rapids creates visual contrast with the surrounding vegetation, gravel bars and water. The range of foreground hills, middle distant mountains, broad flats and foreground hills as one floats down the river creates a mosaic of backdrops for floaters. The small number of historical cabins that blend with the landscape and are mostly hidden from view add some variety and points of interest to the area. The variety of vegetation types and the seasonal colors are an exemplary example for Interior Alaska. Because of these characteristics, the scenic value of Birch Creek is found to be outstandingly remarkable.

Recreational

Evaluation of the Present Situation:

Birch Creek, flowing for the most part through the Steese National Conservation Area, offers outstanding recreational opportunities for non-motorized “float-boat” use for the experienced canoeist (canoeing, kayaking, rafting). It is one of the very few clearwater rivers in the State with road access at two points on an otherwise undisturbed river segment. The recreationist is offered a multi-day wilderness river experience without having to pay the high costs of aircraft transportation. Many rivers in Interior Alaska have extensive motorized use, while Birch Creek offers an 8 to 14 day non-motorized float opportunity. It is one of the few accessible rivers that offer a floater the experience of all phases of a river, from headwater stream to full meandering river with a whitewater experience. Floaters experience solitude, closeness with nature and wildlife, escape from personal pressures, everyday demands of life and crowds, and exploration of new areas. The chance of seeing wildlife is good with peregrine falcons, bald eagles, and beaver being common. Wolf, bear, fox, lynx, and occasionally caribou may be seen.

River floaters demographics are local Fairbanks, Anchorage, national, and international. They come to float a multi-day wilderness type experience as a major part of their Alaska destination. The clear-water whitewater is unique for open floaters, as well as smaller whitewater craft. Hunters from the Lower-48 bring rafts and canoes for the float-hunting opportunities. International use has occurred in the past and is anticipated to occur again in the future with users from Germany the primary user group willing to pay for a guided experience. While floating the river, users also enjoy seeing wildlife, fishing, hunting, remote primitive camping, hiking to higher vista points, amateur geology, and photography.

Finding

Birch Creek is recognized regionally and nationally as an accessible, freshwater and whitewater wild river providing a multi-day primitive floating and camping experience which is considered unique. The rivers presentation of diverse geological values is unique within the region that includes a stretch of whitewater caused by bedrock outcrops and the changes in river character from headwater to mature stream. This creek is a good example of the typical diversity of vegetation types and seasonal variations that enhance the river experience. The recreational value of Birch Creek is found to be outstandingly remarkable.

Geologic

Evaluation of the Present Situation:

Most of the bedrock along Birch Creek WSR consists of Paleozoic to Late Precambrian metamorphic rocks (primarily schist and quartzite) that are among the oldest rocks in Alaska. Geologists formerly referred to these rocks as Birch Creek Schist, a name inspired by the characteristic outcrops along this river.

Also exposed in cutbanks along Birch Creek are melting ice lenses, part of the permanently frozen soils, or permafrost, underlying much of the river valley. Supporting evidence and examples of the geologic processes include, but are not limited to:

- Active landslides and thawing permafrost along the river provide opportunities to observe dynamic and ongoing geologic processes.
- Birch Creek's usually clear water is characteristic of certain Interior Alaska rivers that, unlike most rivers in the state, drain terrain that did not experience extensive continental and/or alpine glaciation.
- Classic exposures of Birch Creek Schist are found in sheer rock walls below Harrison Creek and along both banks at Shotgun Rapids.
- Numerous periglacial features, including altiplanation terraces and tors, can be seen from the river on nearby ridges.

Finding

Outcrops of schist along the river could be considered "textbook" in that they served as inspiration for naming the Birch Creek Schist. However, this rock type is widely dispersed in the Yukon-Tanana Upland, and similar bluffs and rapids exist on the region's other rivers. Similarly, the periglacial features, permafrost exposures, and general hydrology of Birch Creek are widely distributed in the region. Geology is therefore not an outstanding remarkable value of Birch Creek.

Fish Populations and Habitat

Evaluation of the Present Situation

Birch Creek supports 12 known species of fish and has one of the highest diversity of fish in the region.

Anadromous species: Birch Creek supports populations of Chinook, chum, and coho salmon. Various environmental factors make it difficult to gather population data for Chinook salmon in Birch Creek. The relative health of Birch Creek Chinook may be assessed to some extent by the health of Yukon River Chinook salmon that are still experiencing below average returns (Volk et al. 2009). With below average returns in the Yukon River, all streams providing spawning and rearing habitat for Chinook salmon are highly important both locally and regionally.

Resident species: Birch Creek also supports healthy and viable populations of Arctic grayling, round and humpback whitefish, sheefish, least cisco, northern pike, burbot, slimy sculpin, and blackfish.

Habitat: Major stream-disturbing activities such as placer mining have been active in the Birch Creek watershed for over one hundred years. While it is not known to what degree these activities affected the various fish populations, Birch Creek does provide critical habitat for up to many fish species making it one of the most diverse watersheds in the region.

Finding

Birch Creek has one of the highest diversity of fish of all rivers in the region. This diversity makes fisheries an outstanding remarkable value for Birch Creek.

Wildlife Populations and Habitat

Evaluation of the Present Situation

Birch Creek WSR supports a dense nesting population of American peregrine falcons that occur on riverside cliffs and bluffs. The species was an Endangered Species under the Endangered Species Act at the time of Birch Creek WSR designation and was delisted in 1999. Similar densities of nesting peregrines occur on few other rivers in the region (Fortymile WSR and the Yukon River within Yukon-Charley Rivers National Preserve).

Peregrine falcons are one component of a complete assemblage of subarctic wildlife species present along Birch Creek at natural levels of abundance and among habitats and plant communities essentially unchanged from natural conditions. The riparian habitats supported by the river are productive and provide key habitat for many species. River corridor and adjacent habitat combine to support this complete assemblage of species. Other raptors nesting along the river include frequently-observed red-tailed (Harlan's) hawks, a few nesting bald eagles, and occasional osprey. The lower section of the river supports extensive riparian vegetation that is excellent moose habitat. The many wetlands and oxbow lakes in the lower river corridor also support important waterfowl and shorebird nesting, including significant waterfowl molting and nesting of lesser scaup, pintails, widgeons, mallards, green-winged teals, white-winged scoters, buffleheads, American goldeneyes, canvasbacks, and shovelers. Trumpeter swans (BLM Alaska sensitive species) also nest in oxbow and other lakes in the river corridor.

Wolves occur in the area and at least one den site is known to occur in the river corridor. Caribou of the Fortymile herd travel on the river ice in winter and use the adjacent uplands in winter and summer. The river is a popular hunt area (sport and subsistence) for moose and caribou, via float boats and (in the lower portion) motorized river boats. The river receives its heaviest use during moose hunting season.

Finding

While the wildlife values of Birch Creek are high, they do not constitute an ORV of at least regional significance. Wildlife values do contribute to the recreational ORV for the river as wildlife watching is often component of recreational activities.

Cultural

Evaluation of the Present Situation

There are eight prehistoric sites within or immediately adjacent to the Birch Creek WSR Corridor. They are all shallow or surface lithic sites; therefore, likely late prehistoric Athabascan sites.

Most are located on high promontories; therefore, likely hunting lookout sites. One potential early historic Athabascan village site, which may have once contained a prehistoric component, is also located inside the corridor. However, the location of this site is known only from historic documentation, and has never been verified archaeologically, despite repeated attempts by different researchers over the past four decades. A couple of the sites have features or topographic settings that may indicate short-term camping locales. None have been evaluated for eligibility to the National Register of Historic Places, although field notes indicate that all likely have at least some buried, undisturbed deposits, which along with other variables may make them eligible to the Register.

An evaluation of the topographic settings inside the Birch Creek WSR Corridor indicates that, although additional prehistoric sites may be found, they will not likely vary in site type from those already discovered. For example, there is little likelihood of locating a caribou drive line site, or a permanent or winter village site, within the corridor. If such rare types of sites were found inside the corridor, they would likely contribute to culture or prehistory being an ORV in any future re-evaluation of Birch Creek. Similarly, if prehistoric utilization of riverine resources (e.g., salmon) are discovered, such a regionally relatively rare site type would too likely contribute to a prehistoric ORV re-evaluation for Birch Creek.

Finding

The prehistoric uses of the Birch Creek corridor (such as short-term camping, lookout hunting sites) are typical of this and many other river settings in the region. None of the known prehistoric sites are particularly unusual or rare within the region of comparison. While the examples of the known prehistoric sites do indeed seem typical, or exemplary, of their site types, one cannot argue that they are “especially good examples” of their types owing to a present lack of quantitative data at the present time. Cultural, or prehistoric archaeology, is therefore not an ORV.

Historic

Evaluation of the Present Situation

Birch Creek is of interest in the regional history of eastern Interior Alaska because of its association with a pre-Klondike gold rush. Gold miners first prospected in the area in the early 1890s, and the first economically viable gold discovery was made at Pitka’s Bar in 1893 by Pitka Pavaloff and Sergei Cherosky, two miners of mixed Russian-Athabascan descent. The following year saw a rush or stampede up the creek when about 100 other men descended in the area.

The creek and associated supply town on the Yukon River, Circle City, was virtually emptied of miners following the 1896 Klondike gold discovery further up the Yukon River in Canada. Mining would resume along tributaries of Birch Creek and in surrounding areas in the years following the Klondike strike, and continues through to the present day.

There are about 21 historic-era sites known within or immediately adjacent to the corridor. Of these, five have eroded away with no or very little remaining evidence of their existence. Three others have been built and occupied within the last 50 years, including one framed building covered with corrugated sheet metal that was occupied seasonally nearly every year from 1959-1993. The remaining 13 are spruce log cabin sites, often with an assortment of outbuildings (e.g., doghouses, caches, trash dumps). All but one of these are collapsing, the sole exception a refurbished cabin that was likely originally constructed in the 1920s to 1930s. Based upon artifacts, some historic documentation, and writings on the walls, these 13 sites date variably

from the early 1900s through the 1970s or 1980s. Sites with evidence of a post-1959 occupation had further evidence of earlier occupations; they were apparently refurbished and reused in later times. The remaining cabin ruin sites were all mining and prospecting or trapping related, based on historical documentation, artifacts or features at the sites, or comparison to known cabins in the comparative region. One of the sites that has eroded away was an early 20th century roadhouse, and another was the purported site of a historic Athabascan village.

Of the 13 sites that have components older than 50 years and that have not eroded away, none have been evaluated for eligibility to the National Register of Historic Places. Field notes indicate, however, that most if not all of these sites have undisturbed cultural deposits, which along with other variables, may make them eligible to the Register.

As most historic-era sites leave at least some type of surface presence, it is likely that most cabin ruins or above-ground structure ruins have been identified inside the corridor. Any undiscovered ruin sites will most likely represent more examples of the types already found; that is, 20th century mining and trapping related sites. Other historic site types that are probable along Birch Creek but have not been discovered are those that leave more ephemeral traces, such as graves, mining prospect and other types of sub-surface pits, and short-term camps that do not involve permanent buildings (e.g., hunting camps; prospect camps). Examples of rare historic sites that may be present in the corridor, and that would likely contribute to history being an outstanding remarkable value in any future reevaluation of Birch Creek, include (1) definitive pre-Klondike era historic mining/prospecting sites, and (2) any early historic or protohistoric Alaska Native sites typifying traditional land use or subsistence practices.

Finding

The historic traces found inside the Birch Creek corridor are typical of this and many other river settings in the region. None of the known historic sites are particularly unusual or rare within the region of comparison. The known historic sites seem typical, or exemplary, of their site types, of which there are hundreds more known scattered throughout the region of comparison, both on BLM and non-BLM lands. Taken alone, the historic sites found inside the Birch Creek corridor that are exemplary of mining and prospecting and trapping enterprises do not constitute an ORV.

Conclusion

The scenic, recreation, and fish values of Birch Creek WSR are determined to be outstandingly remarkable.

Appendix F. Method for Delineating Caribou and Dall Sheep Habitats

This appendix describes the process and information the BLM used to derive habitat polygons displayed on Maps 5 and 6. These areas represent portions of habitats to which select management decisions apply, and are based on information available during development of the RMP.

Crucial Caribou and Dall Sheep Habitat (Map 5)

The Eastern Interior Field Office identified and delineated caribou habitats used during calving and postcalving based on agency reports and published literature as well as a spatial analysis of data collected by BLM and ADFG from radiocollared female caribou. We similarly delineated Dall sheep habitats from telemetry and other data. Because caribou calving habitats have shifted through time, we used a combination of historical information and recent telemetry data to delineate those habitats that have been most highly used and are likely most important. We combined caribou and Dall sheep habitat areas and adjusted delineations to meet management objectives.

The majority of the Steese National Conservation Area (NCA) was utilized for caribou calving historically (Valkenburg and Davis 1986). For much of the 20th century, the Steese-Fortymile herd calving area was centered on the headwaters of Beaver Creek and Preacher Creek. During this time, many Fortymile caribou reportedly calved en route to the White Mountains, (e.g., in Birch Creek). In addition, Birch Creek became the primary calving area after the Steese-Fortymile herd abandoned the White Mountains calving area. The Clum's Fork calving area in the South Unit Steese NCA was a heavily-used or primary calving area from the mid-1960s through 1979 (Valkenburg and Davis 1986).

We used recent radiocollar data from collared White Mountains caribou (1982-2008, Durtsche and Hobgood 1990, J. Herriges, unpublished data) to define calving and postcalving habitat in the North unit of the NCA and adjacent White Mountains National Recreation Area (NRA). Locations of collared female caribou during May 11- May 27 (representing calving) and May 28 – June 30 (representing postcalving) were analyzed with a kernel density estimator in a manner similar to that used in the Fortymile Caribou Herd Habitat Management Needs Assessment (Fortymile Caribou Herd Planning Team 2000) and by Boertje et al. (2012). Some White Mountains caribou disperse widely during calving (relative to large herds such as the Fortymile that tend to aggregate during calving), and so the 75% isopleths from kernel density estimations were chosen to represent the most used (and presumably highest quality) calving and postcalving habitats (BLM PRMP, Map 84). This area matched descriptions of the most concentrated historical Fortymile caribou calving, except that some White Mountains herd caribou also used an area west of Beaver Creek for calving. (See Figure M.3 in the Proposed Resource Management Plan, BLM 2016.)

A spatial analysis of recent (1992-2008) locations of radiocollared Fortymile caribou (see Appendix F, Fortymile ROD/Approved RMP BLM 2016) showed an area of concentrated calving in the upper Salcha River and adjacent South Fork Birch Creek. We chose the 90% isopleths from this analysis to represent calving and postcalving habitats in this area.

Calving and postcalving use by Fortymile caribou also was reported historically in the upper drainages of Birch Creek between the historical Clum's Fork calving area and the recent

concentrated calving area in South Fork Birch Creek (Davis et al 1978, Valkenburg and Davis 1986). This area, which also included mineral licks at and near Big Windy Hot Springs and Dall sheep habitat in that area (Lawler et al. 2005), was included in a caribou calving/postcalving polygon.

We delineated Dall sheep habitat by drawing irregular polygons around at least 95% of GPS radiocollar relocations obtained in two studies conducted in the White Mountains during 2004-2009 (BLM and FWS unpublished data) and Birch Creek (Lawler et al. 2005). We excluded scattered locations except along known movement routes. We then added a ¼ mile buffer around the outside of these polygons.

We delineated known Dall sheep mineral licks identified during radiotelemetry studies, aerial surveys, and agency field work (Durtsche et al. 1990, J. Herriges, unpublished data) with a one mile buffer around the location of the lick (or primary lick within a group of licks).

We then combined caribou calving and postcalving habitats and Dall sheep habitat polygons. These polygons delineate the areas that, based on information available in 2009, represent the primary habitats for caribou during calving and postcalving and Dall sheep (year-round) and ungulate mineral licks.

Additionally we adjusted the draft crucial caribou and Dall sheep habitat polygons during the planning process to improve the ability to identify boundaries on the ground and to coincide with other management zones. For example, the eastern boundary in Birch Creek was set at 1,000 feet back from the bank of Clum's Fork (to avoid existing Federal mining claims) and the southwestern boundary in Preacher Creek was expanded to Bachelor and Preacher creeks to coincided with a Recreation Management Zone and include mineral licks and an associated travel corridor.

Sensitive Caribou Winter Range (Map 6)

The entire Steese NCA and White Mountains NRA is suitable for use during winter by caribou of the White Mountains and/or Fortymile herds. Non-forested habitats allow snowmobiles to move rapidly, unpredictably, and widely across an area, potentially disturbing wintering caribou and possibly resulting in caribou avoidance of these areas.

We identified areas that were recently or historically known to support wintering caribou and also contain large expanses of non-forested habitats through analysis of GIS data. The Ducks Unlimited/BLM earthcover classification was displayed in the program ArcMap and large areas of contiguous non-forested habitats were delineated.

Caribou Migration Corridor (Map 6)

Until the late 1960's, most of the Fortymile caribou herd (known then as the Steese-Fortymile herd) migrated across the Steese Highway to calving grounds in the headwaters of Beaver and Preacher Creeks (Valkenburg and Davis 1986). Historical descriptions of this migration describe that most crossings occurred in the area between (and including) Twelvemile Summit and Eagle Summit. We drew a corridor between the historical Clum's Fork calving area and the White Mountains herd calving/postcalving area and included both summits. The boundaries of this corridor include areas known or likely to be used by migrating caribou and follow ridgelines or waterways so that boundaries can be identified on the ground.

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Appendix G. Maps

Map 1 – Land Status

Map 2 – Conservation and Restoration Watersheds

Map 3 – Visual Resource Management

Map 4 – Wilderness Characteristics

Map 5 – Crucial Caribou and Dall Sheep Habitat – Steese and White Mountains

Map 6 – Caribou Migration Corridor and Sensitive Winter Range – Steese and White Mountains

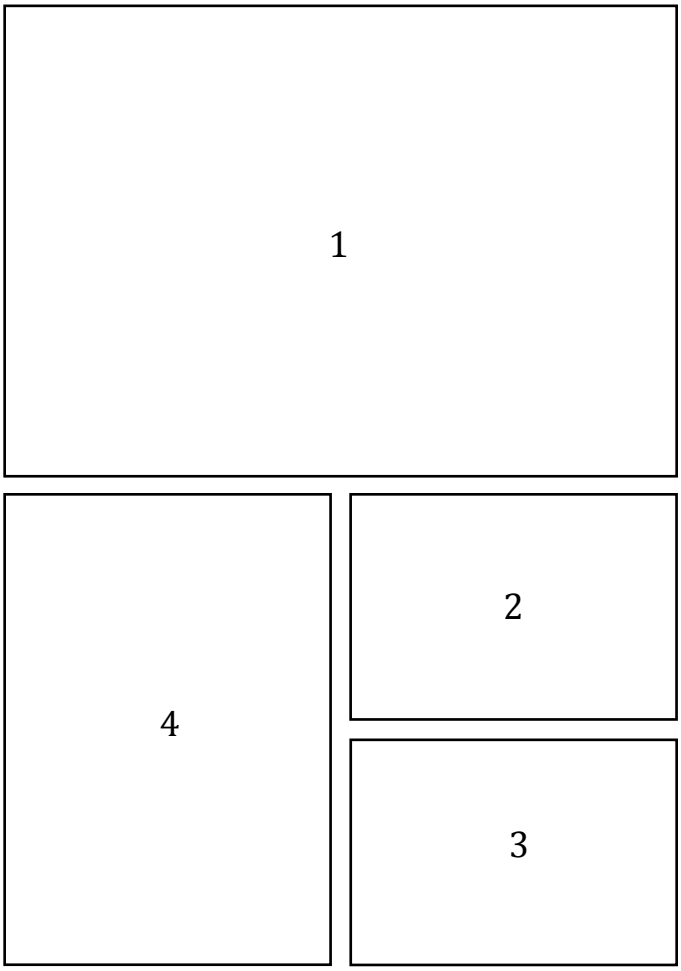
Map 7 – Lands for Retention

Map 8 – Existing Withdrawals and Recommended New FLPMA Withdrawals

Map 9 – Leasable and Locatable Minerals

Map 10 – Interim Travel Management

Map 11 – Recreation Management and Travel Management



BLM back cover photos

1. Musher leads his sled dog team down the frozen Birch Creek Wild and Scenic River during the Yukon Quest International Sled Dog Race
2. Caribou on ridges above Birch Creek Wild and Scenic River
3. Fox running across tundra on a ridge above Thomas Creek
4. Hiker climbs up a ridge after packrafting on Birch Creek Wild and Scenic River