

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

Summary Upper Black River Subunit

**Eastern Interior Draft Resource Management Plan and
Environmental Impact Statement**

February 2012

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Eastern Interior Field Office
Fairbanks, AK



**Summary Upper Black River
Subunit: Eastern Interior
Draft Resource Management
Plan and Environmental
Impact Statement**

**U.S. Department of the Interior
Bureau of Land Management-Alaska
Eastern Interior Field Office
BLM/AK/PL12/006+F000
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In Reply Refer To:
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Dear Reader:

The draft Eastern Interior Resource Management Plan/Environmental Impact Statement (RMP/EIS) was released on Feb. 24, 2012. To help the public in reviewing this large document, the Bureau of Land Management (BLM) has developed executive summaries that describe proposed management for each subunit. These summaries can be found at: <http://www.blm.gov/ak/st/en.html>.

During the Scoping Phase of the development of the Eastern Interior Resource Management Plan/Environmental Impact Statement (RMP/EIS), many people expressed concern about the size of the planning area, which covers approximately 6.7 million acres. They pointed out that issues vary in importance from one part of the planning area to another. This was one of the reasons that the BLM split the planning area into four subunits: Fortymile, Steese, Upper Black River, and White Mountains. These executive summaries leave out the fine details of the RMP, but they should help you learn:

- why we are planning for this area;
- the most important resources in the area and how people use them;
- the major decisions under consideration; and
- the impacts that may occur with each of the alternatives under consideration.

This document is a draft because we are still in the process of choosing the best plan. We appreciate and need your comments. Let us know if there are inaccuracies or new information we should consider. Describe why you think one option is better than another. Please send your comments to us before the end of the official comment period. The comment period extends from Feb. 24 to July 23, 2012.

There are three ways you can submit comments:

- 1) Public meetings will be held in communities within the planning area to discuss the Draft RMP/EIS before the close of the comment period. We will announce the meeting dates, times, and specific locations through news releases and on the Eastern Interior RMP website at: <http://www.blm.gov/ak>.
- 2) You can send written comments to the BLM Fairbanks District Office, Attn: Eastern Interior Draft RMP/EIS, 1150 University Avenue, Fairbanks, Alaska, 99709.

- 3) Written comments may also be submitted online at https://www.blm.gov/epl-front-office/eplanning/lup/lup_register.do.

The entire Draft RMP/EIS is online at <http://www.blm.gov/ak>. Just click on the link for the Eastern Interior RMP/EIS website under "In the Spotlight." For a hard copy of the draft RMP/EIS document and for additional information or clarification regarding the summaries, Draft RMP/EIS, or the planning process, please contact Jeanie Cole, Planning and Environmental Coordinator or Lenore Heppler, Field Manager at (907) 474-2200.

We appreciate your help in this planning effort and look forward to your interest and participation.

Sincerely



Bud C. Cribley
State Director

Chapter 1. Introduction

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1.1. Purpose and Need

Why Are We Doing This Plan?

The Eastern Interior [RMP](#) will determine the appropriate management of [BLM](#) lands in the Eastern Interior Planning Area, including the Upper Black River Subunit. The Draft RMP addresses three questions:

1. What protections and management should be implemented for resources such as fish, wildlife, vegetation, soils, and water within the subunit?
2. What types and levels of use, such as recreation, off-highway vehicle use, and mining, should be allowed and what lands should be available for these uses?
3. Should any areas be designated as wild and scenic rivers or areas of critical environmental concern?

These questions are important because the BLM is required to develop land use plans and manage its lands for multiple-use by the Federal Land Policy and Management Act (FLPMA). Currently there is no plan for BLM lands in the Upper Black River Subunit. Development of the Eastern Interior RMP will allow the BLM to meet its requirements under FLPMA.

1.2. Description of the Upper Black River Subunit

What Lands Are We Planning For?

The Upper Black River Subunit is bounded on the north by the Porcupine River, on the east by the U.S.-Canadian border, on the south by the Yukon-Charley Rivers National Preserve, and on the west by the Yukon River. [BLM](#) lands consist of a large block of land surrounded by the Yukon Flats and Arctic National Wildlife Refuges, Yukon-Charley Rivers National Preserve, state land, and Native corporation land. The villages of Fort Yukon and Chalkyitsik are located within the subunit, but are within the Yukon Flats National Wildlife Refuge. The village of Circle is just across the Yukon River from the Subunit.

This subunit is about 7.8 million acres in size, with approximately 2.4 million acres managed by the BLM ([Map 4](#)). There are 716,000 acres of State-selected land within the subunit. Due to its low selection priority, the BLM expects to continue to manage these State-selected lands. Approximately 102,000 acres is selected by Doyon, Limited, or is selected by a village corporation. The BLM will likely retain most of the selected lands in the Upper Black River Subunit as Doyon, Limited, and the village of Circle are close to their full entitlement under [ANCSA](#).

1.3. The BLM Planning Process

What Happens Next?

The BLM's planning process involves nine major steps. We are on step seven, which is to publish the Draft [RMP/EIS](#) for public comment. After the public comment period closes, the [BLM](#) will review all the comments received. The Draft RMP/EIS will be revised as needed, taking public comments into account. Then the Eastern Interior Proposed RMP and Final EIS will be published. The Proposed RMP may be protested to the Director of the BLM and is also reviewed

by the State of Alaska for consistency with state programs. After any protests are resolved and the consistency review is complete, the Final RMP and Record of Decision will be published. Once the Record of Decision for the Upper Black River Subunit is published, decisions in the Approved RMP will be implemented.

1.4. Resources in the Upper Black River Subunit

What Resources Are in the Subunit?

There are far too many resources to describe them all in this summary. A few of the resources addressed by the [RMP](#) include fish, wildlife, and minerals.

Fish and Aquatic Resources

The [BLM](#) manages about two million acres of the five-million-acre Black River watershed. The Black River is a low gradient river that meanders through broad, irregular flats, which are mostly underlain by continuous permafrost. Subsistence fisherman catch salmon, whitefish, pike, and burbot in the Black River and its' tributaries which are the most productive sources of fish in the area.

This area is very remote, and as a result, a limited number of fisheries studies have been performed in the watershed. In 2009 the BLM conducted fishery inventories on the Salmon Fork of the Black River. Juvenile Chinook salmon were found during these inventories. Data collected during these surveys will likely result in extending the Alaska Department of Fish and Game's (ADF&G) anadromous stream catalogue in the mainstem Salmon Fork and two of its tributaries.

The Salmon Fork is a clear running, moderate gradient river system supporting a wide variety of aquatic and riparian organisms. It supports at least eight species of fish, including Chinook salmon and a significant run of fall chum salmon. Sheefish use the Salmon Fork for summer feeding and Alt (1987) found evidence that suggests sheefish may spawn in the Salmon Fork. This would be significant as there are only five known sheefish spawning locations in the entire Yukon River drainage. Arctic grayling are found in good numbers throughout the Salmon Fork and were the most abundant of all fish species sampled during a fisheries inventory conducted in 1991.

Wildlife

Moose occur throughout the Upper Black River Subunit at elevations below about 3,000 feet. During fall and early winter, mid- to high-elevation shrub and open spruce habitats support higher densities of moose, along with recently burned (10 to 30 years) habitats. During the winter, moose tend to concentrate at lower elevations and especially along creeks and rivers. In summer, moose are widely dispersed and pregnant cows often travel to low-elevation areas with abundant wetlands for calving and summer. Systematic population surveys have not been conducted in Game Management Unit 25(B) (Upper Black River Subunit), but populations are considered to be low and probably declining.

The Porcupine caribou herd uses the Upper Black River Subunit during winter. The most recent population estimate of 123,052 caribou was obtained in 2001 and indicated a steady decline since 1989, when 178,000 caribou were estimated. It is likely that the Porcupine herd has continued to decline and possibly numbered between 110,000–115,000 caribou in 2006 (Lenart 2007). The Upper Black River Subunit is only a small proportion of the herd's current winter range. This habitat may be more important at some population levels or in years when weather conditions may

be more favorable here than in other areas. Lightning-caused wildfires have been more frequent in recent years. These fires impact caribou winter range by reducing forage lichens for at least 50 years. Whether this impacts the herd depends on the extent of other winter range available.

Dall sheep likely use the higher portions of the Kandik River, and upper Grayling Fork drainages in the Upper Black River Subunit. These areas are not mapped by [ADF&G](#) as sheep habitat, but occasional use by sheep is likely. The Keele Range, north of the Salmon Fork of the Upper Black River in Alaska, has been reported to have supported Dall sheep and sheep hunting in the recent past (Vuntut Gwitchin Government and Yukon Territory Government 2009, Caulfield 1983, J. Matesi pers. comm.) and a peak there is named Divii dhaa (sheep mountain, Caulfield et al. 1983); but there are no recent records of Dall sheep in this area. Sheep or sheep sign were not observed during the BLM field trips in the area in 1991 and 1997.

Leasable Minerals

Leasable minerals are defined by the Mineral Leasing Act and include coal, oil shale, native asphalt, phosphate, sodium, potash, potassium, sulfur, oil, gas, coalbed natural gas, and geothermal resources. Exploration and production of these minerals on [BLM](#) lands may only occur on leases acquired by competitive leasing. The only leasable mineral occurring on BLM land in the Upper Black River Subunit is oil and gas.

Most BLM lands in the Upper Black River Subunit have low or no potential for oil and gas, even though it includes portions of the Kandik and Yukon Flats oil and gas basins ([Map 96](#)). Presently, the subunit is closed to oil and gas leasing and there are no active federal oil and gas leases. Three exploratory wells have been drilled in the Kandik region. All three wells were dry holes.

In 2004, the U.S. Geologic Survey conducted a study of the Yukon Flats Basin and determined the existence of technically recoverable oil. This report estimated a resource of 173 million barrels (mmb) of oil, 127 mmb of natural gas liquids, and 5.46 trillion cubic feet of gas. The lack of deep wells within the basin, however, makes this resource assessment uncertain. The Yukon Flats Basin overlaps with the Upper Black River Subunit near Circle. The parts of the basin with the highest potential are located within the Yukon Flats National Wildlife Refuge; these areas have comparatively high potential for generating oil or gas. Although the potential that oil and gas exists below the surface of BLM lands near Circle is high, the potential for these resources to be developed during the life of the [RMP](#) is very low.

Locatable Minerals

Locatable minerals are minerals for which the right to explore, develop and extract the mineral resources is established by the staking of mining claims as authorized by the General Mining Law of 1872. Examples of locatable minerals include gold, silver and copper. The Upper Black River Subunit is currently closed to the staking of mining claims and there are no existing federal mining claims in the area.

The potential for gold in the subunit is low ([Map 97](#)). Mineral terranes are not favorable for the production of gold. There are no known significant mineral deposits in the subunit. The potential for placer mining of gold during the life of the RMP is low.

The lands in the Upper Black River Subunit are currently closed to mineral entry and location. These closures (or withdrawals) were put into place in the early 1970s under the Alaska Native Claims Settlement Act (ANCSA) to keep the lands free of mining claims and mineral leases while

the Native corporations selected lands for their ANCSA entitlement. The Native corporations have submitted their final land selection priorities. The Draft RMP considers opening some lands in the subunit to multiple-use.

1.5. Use of the Upper Black River Subunit

How Are People Using the Land Now?

The Upper Black River Subunit is very remote and difficult to access. The primary uses occurring in the area are subsistence activities and dispersed recreation. Caulfield (1983) describes subsistence use areas and annual cycles both historically and from 1970 through 1982 for Chalkyitsik and Fort Yukon. These villages are within the Yukon Flats National Wildlife Refuge and lands immediately adjacent to the villages are Native corporation or Native-selected lands.

The Black River, including those portions surrounded by [BLM](#) lands, is the focus of much of the resource harvest activities of Chalkyitsik residents (Caulfield 1983). During the scoping period for this plan, residents of the village of Chalkyitsik (Dr' aanjik Gwich'in) indicated that the Black River and Salmon Fork area are important subsistence use areas for them ([Map 104](#)). Like most communities in the planning area, life for the Dr' aanjik Gwich'in was highly mobile. From autumn until spring the people lived in the headwaters of the Black River, trapping furbearers and harvesting moose, caribou, sheep, and whitefish. After break-up, they floated down river to fish for the summer. The current village site of Chalkyitsik was a traditional fishing camp. Nelson (1973) documented that by 1969–1970 most Dr' aanjik Gwich'in had moved from seasonal camps to the present village of Chalkyitsik.

Fort Yukon is located at the convergence of the Porcupine and Yukon rivers and has been a gathering place for the Gwich'in since aboriginal times. Fort Yukon became a center of commerce in the region during the 1870s as gold was discovered throughout the Klondike, Fortymile, and Birch Creek drainages. It remains a center of commerce and transportation in contemporary times, and has a more mixed economic base of employment and subsistence than other communities in the region (Caulfield 1983). The subsistence use area for Fort Yukon includes portions of the Steese and the Upper Black River subunits. The use areas documented by Caulfield (1983) include BLM-managed lands for bear and moose hunting near Circle and trapping around the confluence of Grayling Creek with the Black River, which is primarily refuge and Doyon, Limited, lands.

Residents of Circle extensively use areas in the subunit, primarily up and down the Yukon River into Yukon Flats National Wildlife Refuge and Yukon-Charley Rivers National Preserve, but also have a long history of use in the Little Black River. Trapping in particular has been documented on BLM lands in the subunit (Caulfield 1979). Most access is by snowmachine.

The Upper Black River Subunit is remote and probably seldom visited by recreational users. There are no developed recreation sites. There are currently no active guiding permits. The BLM has, however, issued permits for guided hunting in the past.

Chapter 2. Alternatives

What Decisions Will the RMP Make?

The Eastern Interior [RMP](#) will make decisions on a wide variety of resources and resource uses including: management of fish and wildlife habitats, management of off-highway vehicles and access (referred to as Travel Management), and management of mineral resources.

The Draft RMP include four alternatives. These are the No Action Alternative (Alternative A) and three action alternatives (Alternatives B, C, and D). Many of the decisions are the same in more than one alternative. Other decisions vary between alternatives.

Federal agencies often identify an Preferred Alternative in the Draft RMP. The [BLM](#) has identified Alternative C as the Agency Preferred Alternative. The plan adopted for the Approved RMP, may be one of the alternatives presented in the Draft RMP, or it may be created by combining portions of the four alternatives into the selected management option.

What Decisions Are Included in This Document?

The Draft RMP makes too many decisions to list them all in this summary. Only major decisions or those likely to be of most interest to residents of the region are included in the following sections. This summary focuses on allocation decisions. Allocation decisions are those that determine what uses can occur on which lands. For example, describing what areas will be closed to mining or where off-road vehicles would be limited.

Decisions on management of Air Resources, Cultural and Paleontological Resources, Cave and Karst Resources, Forest and Woodland Products, Hazardous Materials, Non-native Invasive Species, Recreation, Salable Minerals, Soil Resources, Special Status Species, Visual Resource Management, Water Resources, and Wildland Fire are not included in this summary. Additionally, not all decisions applying to Fish, Wildlife, Vegetative Resources, Lands and Realty, Minerals, Travel Management, and Special Designations are included. Only the major decisions or allocation decisions are included.

To see all the decisions that apply to the Upper Black River Subunit, see the Eastern Interior Draft Resource Management Plan and Environmental Impact Statement (BLM 2012).

2.1. Summary of the Alternatives

Alternative A, No Action Alternative

Alternative A would continue present management practices and present levels of resource use. Proposed activities would be analyzed on a project-specific basis and few uses would be excluded as long as they were consistent with state and federal laws. One exception to this would be mineral leasing and new mining claims. There would be no new oil and gas leases or mining claims as the lands would remain withdrawn from these types of activities. The subunit would be managed for dispersed recreation. Use of motorized vehicles would be unrestricted.

No new special designations such as areas of critical environmental concern (ACECs) would be considered. There would be no suitability determinations for wild and scenic rivers. There would be no decisions to manage certain lands to maintain wilderness characteristics, although existing management would preserve wilderness characteristics in most areas.

Alternative B

The subunit would remain closed to new mining claims and oil and gas leasing. Off-highway vehicles (OHVs) would be limited by weight, width, and season of use. The Salmon Fork watershed would be designated as an [ACEC](#). The Salmon Fork River would be recommended suitable for designation as “wild” under the Wild and Scenic Rivers Act. Twenty-eight watersheds with the highest fish values would be identified as Riparian Conservation Areas. The subunit would be managed for dispersed recreation, the same as it is currently. Most activities would be analyzed on a project-specific basis and few uses would be limited or excluded, other than mining, as long as they were consistent with the [RMP](#). The entire subunit would be managed to maintain wilderness characteristics.

Alternative C, Agency Preferred Alternative

All of the subunit would be open to new mining claims and 74 percent would be open to oil and gas leasing. OHVs would be limited by weight and width. The Salmon Fork watershed (621,000 acres) would be designated as an [ACEC](#) and would be closed to mineral leasing. Only 13 watersheds would be identified as Riparian Conservation Areas. The subunit would be managed for dispersed recreation. Most activities would be analyzed on a project-specific basis and few uses would be limited or excluded as long as they were consistent with the RMP. The Salmon Fork ACEC would be managed to maintain wilderness characteristics.

Alternative D

All of the subunit would be available for new mining claims and oil and gas leasing. OHVs would be limited by weight and width. The Salmon Fork watershed would be designated as an ACEC, but would not be closed to oil and gas leasing. Fewer watersheds would be identified as Riparian Conservation Areas. The subunit would be managed for dispersed recreation. Most activities would be analyzed on a project-specific basis and few uses would be limited or excluded as long as they were consistent with the RMP.

Summary Table

The following table summarizes decisions that vary by alternative and decisions considered to be of the most interest to readers. This allows you to compare the three alternatives. See also sections 2.3, 2.4, 2.5, and 2.6. of this summary for full text or additional decisions that do not vary by alternative.

Table 2.1. Upper Black River Subunit: Summary of Alternatives

Program or Resource	Alternative B	Alternative C	Alternative D
Fish and Aquatic Species	Manage 28 watersheds as Riparian Conservation Areas (RCAs) (Map 11).	Manage 13 watersheds as RCAs (Map 12).	Manage 5 watersheds as RCAs. (Map 13).
	Complete watershed assessments according to set priorities.	Complete watershed assessments as necessary for management.	
Wilderness Characteristics	Maintain wilderness characteristics on 2,357,000 acres (100 percent) (Map 80).	Maintain wilderness characteristics on 621,000 acres (26 percent) in the Salmon Fork ACEC (Map 81).	Wilderness characteristics would not be explicitly maintained, but would likely remain on most lands.
Lands and Realty	The Salmon Fork Area of Critical Environmental Concern would be a right-of-way avoidance area.	There would be no right-of-way avoidance areas.	
Leasable Minerals	2,361,000 acres (entire subunit) closed to fluid and solid mineral leasing.	621,000 acres (Salmon Fork ACEC) closed to fluid and solid mineral leasing; 1,740,000 acres open.	2,361,000 acres (entire subunit) open to fluid and solid mineral leasing.
Locatable Minerals	2,361,000 acres (entire subunit) closed to locatable minerals.	2,361,000 acres (entire subunit) recommended open to locatable minerals.	
Travel Management	The entire subunit would have a Limited OHV designation.		
	No Summer OHV use in the Salmon Fork ACEC (621,000 acres).	Summer use of OHVs 64 inches or less in width, and with a curb weight of 1,500 pounds or less allowed on 2,361,000 acres.	
	Summer OHV use in the rest of the subunit (1,740,000 acres) limited to vehicles weighing 1,500 pounds curb weight or less.	Summer OHV use in entire subunit (2,361,000 acres) limited to OHVs 64 inches or less in width, and with a curb weight of 1,500 pounds or less.	
	Winter OHV use limited to snowmobiles 50 inches or less in width, and weighing 1,000 pounds or less curb weight on the entire subunit (2,361,000 acres)		
	Motorboat and aircraft use would be unrestricted.		
Areas of Critical Environmental Concern	Designate the Salmon Fork Area of Critical Environmental Concern (621,000 acres) (Map 69).		
Wild and Scenic Rivers	Recommend the Salmon Fork (52 miles) as suitable for designation as a “wild” river under the Wild and Scenic Rivers Act (Map 72).	Do not recommend the Salmon Fork as suitable for designation under the Wild and Scenic Rivers Act.	

2.2. Alternative A (No Action)

There is currently no land use plan for [BLM](#) lands in the Upper Black River Subunit. Applications for the use of BLM lands are considered for approval on an individual basis and few uses are excluded as long as they were consistent with state and federal laws. One exception is mineral leasing and new mining claims. BLM lands are closed to mining and mineral leasing. There are no [OHV](#) designations so the use of motorized vehicles is unrestricted. There are no designated ACECs or wild and scenic rivers.

2.3. Decisions Common to Alternatives B, C, and D

Fish and Aquatic Species

The [RMP](#) defines priority fish species as those species utilized for subsistence, designated as BLM-Alaska sensitive species, federally listed under the Endangered Species Act, and those important for recreation. The [BLM](#) would manage and monitor priority species for self-sustaining populations. Current priority species are: Chinook salmon, chum salmon, coho salmon, Arctic grayling, broad whitefish, humpback whitefish, round whitefish, whitefish, least cisco, sheefish, northern pike, burbot, and Alaska Brook Lamprey.

BLM would manage aquatic habitats to meet the following desired conditions:

- Native aquatic species (fish, invertebrates, plants and other aquatic-associated species) are present and generally well distributed in historically occupied habitats.
- Develop a management plan for special status fish and aquatic species so they can thrive and expand into neighboring unoccupied habitats and depressed populations increase.
- Manage native aquatic animals to exhibit genetic integrity and life history strategies necessary to assure self-sustaining populations.
- Monitor spatial extents of habitat disturbances to be sure disturbances are less than the area occupied by priority species, in order to preserve population structure and life history strategies.
- Ensure populations of native and non-native fishes are managed consistently with federal, state and Native population goals.

The RMP identifies priority habitats as those habitats that support any life stages of priority aquatic species, including both resident and anadromous fish species. The highest priority areas for aquatic species are further designated as Riparian Conservation Areas. These watersheds contain the highest fisheries and riparian resource values within the subunit. In these watersheds, riparian-dependent resources would receive primary emphasis and management activities would be subject to specific requirements.

The BLM would manage aquatic habitats to reach a defined set of desired future habitat conditions. Most watersheds, generally should be in or making progress toward a High Condition Rating (described in Appendix I of the Draft RMP/[EIS](#)). The BLM would design appropriate management actions or mitigate proposed activities at the site-specific project level, in attempt to move watersheds toward a High Condition Rating.

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

Desired stream and riparian habitat conditions include the following factors (for a full description of these factors, see the complete Draft RMP/EIS):

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:
 - Migration routes 15 degrees C.
 - Spawning areas 13 degrees C.
 - Rearing areas 15 degrees C.
 - 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 AAC 70).
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 less than five 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 ninety-five percent for A and B and E channel types; greater than ninety percent for C channel types within eighty percent of any stream reach. Streambank stability would be evaluated using the BLM Multiple Indicator Monitoring technique or other appropriate methodology.
9. Riparian and RCA 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 eighty percent (good-excellent ecological condition). Over eighty 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 and all subunits unless otherwise noted.

The BLM would provide hydrologic data to, and coordinate with, the state to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitats.

To achieve the goals and to meet the Desired Future Conditions for aquatic habitats and species, while maintaining a thriving natural ecological balance and multiple-use relationship, the ROPs in [section 2.7](#) would be implemented on a project-specific basis.

Locate water removal sites to minimize impacts to priority species and to avoid preventing attainment of desired conditions.

The BLM would utilize the watershed matrix to assist in site-specific project impact analysis. Mitigate impacts that are identified during site-specific analysis in the matrix as being potentially degrading to the watershed Condition Rating.

The following decisions apply to mining operations.

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 shall include detailed descriptions of measures that would be used to achieve the following three objectives. By focusing on these three objectives, the probability of fisheries habitat rehabilitation success is increased.

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).

Typically, the operator would satisfy these requirements through the development of a site-specific reclamation plan. Bond release would be based on meeting specific measurable objectives outlined in a monitoring plan (43 CFR 3809.401(b)(3)).

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 Areas and ACEC Specific Requirements:

The management goal in RCAs and ACECs that meet the relevance and important criteria for fish and aquatic resources 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) would be required. Within these areas baseline hydrological data that is adequate to characterize seasonal flow patterns and discharge would be required from the operator. The BLM would 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) would be designed to result in rehabilitation of habitats within an accelerated timeframe (e.g., less than three years) and would focus on active revegetation and streambank stabilization techniques as the basis for reclamation design.

Vegetative Communities

Manage wildland fire to achieve natural fire regimes and ecosystem processes dependent upon fire. Use prescribed fire to improve wildlife habitat.

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.

Manage lichen-rich plant communities as unique habitats due to the slow growth potential of lichen and its great importance to caribou.

The RMP would identify the following as priority plant communities:

- 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

Priority plant species would be plants on the BLM-Alaska Sensitive Species and BLM-Alaska Watch lists.

Wilderness Characteristics

OBJECTIVE: In areas identified for maintenance of wilderness characteristics, manage to maintain naturalness, outstanding opportunities for solitude or a Primitive and unconfined type of recreation, and supplemental values so that these lands retain their wilderness characteristics for the life of the RMP.

DECISIONS:

Management decisions consistent with maintenance of wilderness characteristics are described below. The specific lands where wilderness characteristics would be maintained are described under each alternative.

Consistent with allocation decisions in the RMP, allow other multiple-uses on lands where wilderness characteristics would be maintained, while applying management restrictions (such as conditions of use or mitigation measures) to avoid or minimize impacts to wilderness characteristics and meet the objective retaining wilderness characteristics over the life of the RMP.

For Alternatives B, C, and D the following activities, uses, and decisions could occur in areas identified as lands where wilderness characteristic will be maintained:

- 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
- Summer [OHV](#) use, including mechanized, on designated or existing trails
- Cross-country summer [OHV](#) use in the Upper Black River Subunit
- Locatable mineral location and entry

The following activities, uses, and decisions are generally incompatible with maintaining wilderness characteristics:

- Mineral leasing
- Summer OHV use off of designated or existing trails (except in the Upper Black River Subunit)
- Areas of desired future developed recreation facilities
- Uplands adjacent to navigable rivers where the State of Alaska may authorize development
- Lands available for disposal

Wildlife

Manage habitat for migratory birds to emphasize avoidance or minimization of negative impacts, and to restore and enhance habitat quality (Executive Order 13186).

Minimize impacts to known nest sites of priority raptors from actions authorized by the [BLM](#). Priority raptor species are peregrine falcon, gyrfalcon, bald eagle and golden eagle. Nest sites of other raptors would be managed similarly, although management would generally be less restrictive and would be determined in site-specific environmental analyses.

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.

Prohibit the use of domestic goats, alpacas, llamas, and other similar species in conjunction with BLM-authorized activities occurring in Dall sheep habitat. Educate the public about the risks of using pack animals within Dall sheep habitat.

Protect crucial wildlife habitats through special restrictions, where necessary, including yearlong or seasonal activity restrictions and minimum altitudes for aircraft use.

Avoid or minimize impacts from projects that could degrade riparian areas and promote restoration of riparian areas to achieve proper functioning condition.

The RMP identifies the following species as priority wildlife species: caribou, Dall sheep, moose, peregrine falcon, gyrfalcon, bald eagle, golden eagle, martin, lynx, and all Special Status Species.

Inventory, and monitor priority wildlife species and their habitats. Monitor populations of priority and subsistence wildlife species in cooperation with [ADF&G](#) and USFWS. Identify important habitats for priority species and monitor changes.

Lands and Realty

Allow [FLPMA](#) leases throughout the subunit, except where prohibited by law or public land order. All FLPMA leases would be at fair market value. Cabins or permanent structures used for private recreation may not be authorized. FLPMA lease proposals on selected lands must include a letter of non-objection from the selecting entity. Proposals for commercial use leases of cabins (such as guiding or trapping) would be considered.

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](#). Land use permits would be considered throughout the subunit with the following limitations:

1. Cabin or permanent structure permits are not issued for private recreation uses.
2. Trapping shelters would be authorized by short-term (three years maximum) Section 302 permits renewable at the discretion of BLM and generally “tied” to the applicant’s ability to show actual use for commercial or subsistence trapping purposes.
3. Permit authorizations on all other BLM-managed lands would be considered pursuant to Section 302 of FLPMA.
4. Military maneuver permits would be considered within the planning area.
5. Permits for administrative use of BLM-managed lands by the state would be considered throughout the planning area.

Trespass cabins may become the property of the U.S. Government and be managed as administrative sites, emergency shelters or public use cabins. 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.

There would be no right-of-way exclusion areas. Rights-of-way authorizations on all BLM lands would be considered, and authorized under Title V of [FLPMA](#) in accordance with the regulations found in 43 [CFR](#) 2800. Rights-of-way would be located near other rights-of-way or on already disturbed areas whenever practical and reasonable to do so.

Allow for additional communication site development on BLM lands. Ensure coordination between existing and potential communication site users, and maximum utilization of existing sites (43 CFR 2800).

Travel Management

Designate all BLM-managed lands as Open, Limited, or Closed to motorized travel activities (43 CFR 8340.0-5(f), (g) and (h)).

Open: "...an area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards set forth in subparts 8341 and 8342..."

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."

Closed: "...an area where off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the Authorized Officer." In closed areas, a permit for motorized use may be issued pursuant to FLPMA, [ANILCA](#), and the 1872 Mining Law.

Subsistence

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

Implement the [ROPs](#) and Fluid Mineral Leasing Stipulations (section 2.7) to assure access to and movement corridors for subsistence resources (roads, powerlines, other rights-of-way, buildings, pipelines, towers) and to minimize displacement of subsistence resources.

Comply with [ANILCA](#) Section 810 Evaluation and Finding during analysis of all land use proposals. The management of WSRs is to cause the least adverse impact possible on subsistence values (Section 802 of ANILCA).

Require infrastructure 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 would significantly restrict access by subsistence users¹. Review subsistence decisions in land use plans for adjacent lands and coordinate with the respective land managers and [ADF&G](#) when proposed land use actions may affect those lands.

2.4. Alternative B

In addition to the decisions listed as common to all alternatives under section 2.3 above, the following decisions would apply to Alternative B.

¹Review of current land use restrictions and further analysis of existing data would help identify areas that may warrant restricted uses. Existing data would include technical reports on subsistence use, input from rural subsistence hunters, and locatable mineral analysis.

Fish and Aquatic Species

The following 28 High Priority Conservation Watersheds would be managed as Riparian Conservation Areas ([Map 11](#)).

1. Headwaters Little Black River (HUC # 190402060105)
2. Little Black River (HUC # 190402060106)
3. Indian Grave Creek (HUC # 190404010906)
4. Little Black River (HUC # 190402060109)
5. Kandik River (HUC # 190404010908)
6. Big Sitdown Creek (HUC # 190404010903)
7. Unnamed Tributary - Kandik (HUC # 190404010901)
8. Headwaters Kandik River (HUC # 190404010902)
9. Little Black River (HUC # 190402060404)
10. Bear Mountain Creek (HUC # 190402040404)
11. Black River (HUC # 190402040802)
12. Big Duck Lake-Black River (HUC # 190402040804)
13. Grayling Fork Black River (HUC # 190402040504)
14. Grayling Fork Black River (HUC # 190402040502)
15. Grayling Fork Black River (HUC # 190402040705)
16. Grayling Fork Black River (HUC # 190402040701)
17. Unnamed Tributary - Upper Black River (HUC # 190402040704)
18. Unnamed Tributary - Upper Black River (HUC # 190402040702)
19. Unnamed Tributary - Upper Black River (HUC # 1190402040703)
20. Outlet Runt Creek (HUC # 190402041005)
21. Salmon Fork Black River (HUC # 190402041107)
22. Salmon Fork Black River (HUC # 190402041403)
23. Salmon Fork Black River (HUC # 190402041105)
24. Tetthajik Creek (HUC # 190402041207)
25. Lower Kevinjik Creek (HUC # 190402041309)
26. Yukon River (HUC # 190404011903)
27. Yukon River (HUC # 190404011904)
28. Fourteenmile Creek-Yukon River (HUC # 190404011906)

Complete watershed assessments based on the following priorities.

1. Watersheds containing areas of high/moderate locatable mineral potential.
2. Watersheds identified as RCAs.
3. Other watersheds.

Wilderness Characteristics

Manage 2,357,000 acres (all of the lands with wilderness characteristics in this subunit) to maintain those wilderness characteristics ([Map 80](#)).

Lands and Realty

Retain lands in the Upper Black River Subunit in BLM management. Consider acquisition of private inholdings from willing sellers.

Designate the Salmon Fork Area of Critical Environmental Concern as a right-of-way avoidance area.

Leasable Minerals

The entire subunit, 2,361,000 acres would be closed to both fluid (oil and gas, geothermal, coalbed natural gas) and solid mineral leasing (coal).

Locatable Minerals

The entire subunit, 2,361,000 acres would be closed to locatable minerals.

Travel Management

Off-Highway Vehicle Designation – LIMITED

Travel Management Prescriptions:

All forms of non-motorized use would be generally allowed.

Cross-country winter use (October 15 through April 30) of snowmobiles 50 inches or less in width, and weighing 1,000 pounds [curb weight](#) and less would be allowed throughout the entire subunit.

Cross-country summer use (May 1 through October 14) use of vehicles 64 inches or less in width and weighing 1,500 pounds curb weight and less would be allowed outside of the Salmon Fork ACEC ([Map 69](#)). Within the ACEC, no summer OHV use would be allowed.

Aircraft use would be generally unrestricted, with the following provisions: Minimal clearing of rocks, downed logs, and brush would be allowed; Construction or formal improvement of landing areas would occur by permit only; Use of gravel bars and winter snow areas would be allowed, subject to reasonable provisions in the Salmon Fork to protect the Outstandingly Remarkable Values of the suitable “wild” river segment.

Use of motorized boats would be unrestricted.

A permit or approved Plan of Operations would be required for all other vehicle use.

New restrictions could be developed for the purposes of site protection, visitor safety, and/or maintaining an unconfined and primitive type of recreation consistent with the existing wilderness character.

Areas of Critical Environmental Concern

Designate approximately 621,000 acres within the Salmon Fork watershed as the Salmon Fork Area of Critical Environmental Concern ([Map 69](#)).

- Manage limestone habitats and steep south facing slopes and bluffs to minimize impacts on rare flora.
- Maintain water quality to support nesting Bald Eagles and salmon habitat.
- Coordination and notification with the Government of Canada is required prior to development affecting caribou habitat.

- Provisions should be made in management to allow the herd to continue to utilize the winter habitats in the area.
- Avoid or minimize the size, extent, duration, and level of activities in concentrated seasonal use areas. Additional limitations on [OHV](#) use (such as seasonal restrictions) may be instituted to reduce impacts to natural resources.

Wild and Scenic Rivers

Under Alternative B, the Salmon Fork of the Black River (52 miles) would be recommended suitable for designation as “wild” under the Wild and Scenic Rivers Act.

2.5. Alternative C

In addition to the decisions listed as common to all alternatives under section 2.3 above, the following decisions would apply to Alternative C.

Fish and Aquatic Species

The following 13 High Priority Conservation Watersheds would be managed as RCAs ([Map 12](#)).

1. Indian Grave Creek (HUC # 190404010906)
2. Kandik River (HUC # 190404010908)
3. Big Sitdown Creek (HUC # 190404010903)
4. Unnamed Tributary - Kandik (HUC # 190404010901)
5. Headwaters Kandik River (HUC # 190404010902)
6. Salmon Fork Black River (HUC # 190402041107)
7. Salmon Fork Black River (HUC # 190402041403)
8. Salmon Fork Black River (HUC # 190402041105)
9. Tetthajik Creek (HUC # 190402041207)
10. Lower Kevinjik Creek (HUC # 190402041309)
11. Yukon River (HUC # 190404011903)
12. Yukon River (HUC # 190404011904)
13. Fourteenmile Creek-Yukon River (HUC # 190404011906)

Complete watershed assessments as necessary for management.

Wilderness Characteristics

Wilderness characteristics would be maintained on 621,000 acres (26 percent of the area with wilderness characteristics in this subunit). These lands occur within the Salmon Fork Area of Critical Environmental Concern ([Map 81](#)).

Lands and Realty

Retain the Salmon Fork Area of Critical Environmental Concern in BLM management. Consider acquisition of private inholdings from willing sellers.

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

No right-of-way avoidance areas would be designated.

Leasable Minerals

Under Alternative C, 621,000 acres in the Salmon Fork Area of Critical Environmental Concern would be closed to fluid and solid mineral leasing.

Approximately 104,000 acres in the Circle area would be open to fluid and solid mineral leasing subject to minor constraints ([Map 38](#)).

The remainder of the subunit, approximately 1,636,000 acres, would be open to fluid and solid mineral leasing subject, to the Standard Lease Terms.

Locatable Minerals

The entire subunit, 2,361,000 acres, would be open to locatable mineral entry.

Travel Management

Off-Highway Vehicle Designation – LIMITED

Travel Management Prescriptions:

Same as Alternative B, except summer cross-country use of vehicles weighing 1,500 pounds [curb weight](#) and less would be allowed on all lands, including the Salmon Fork Area of Critical Environmental Concern.

In the remainder of the subunit, revoke the [ANCSA](#) 17(d)(1) withdrawals and open 1.7 million acres to the public land laws, including locatable mineral entry and mineral leasing.

Areas of Critical Environmental Concern

Same as Alternative B.

Wild and Scenic Rivers

The Salmon Fork of the Black River would not be recommended suitable for designation under the Wild and Scenic Rivers Act.

2.6. Alternative D

In addition to the decisions listed as common to all alternatives under section 2.3 above, the following decisions would apply to Alternative D.

Fish and Aquatic Species

The following five High Priority Conservation Watersheds would be managed as Riparian Conservation Areas ([Map 13](#)).

1. Kandik River (HUC # 190404010908)
2. Headwaters Kandik River (HUC # 190404010902)
3. Salmon Fork Black River (HUC # 190402041107)
4. Salmon Fork Black River (HUC # 190402041403)

5. Salmon Fork Black River (HUC # 190402041105)

Complete watershed assessments as necessary for management.

Wilderness Characteristics

Under Alternative D, wilderness characteristics would not explicitly be maintained in the Upper Black River Subunit.

Lands and Realty

Same as Alternative C.

Leasable Minerals

Approximately 721,000 acres in the following areas would be open to fluid and solid mineral leasing subject to minor constraints:

- Salmon Fork Area of Critical Environmental Concern (621,000 acres)
- Riparian Conservation Areas on the Salmon Fork and Kandik rivers (10,000 acres)

The remainder of the subunit, approximately 1,640,000 acres, would be open to fluid and solid mineral leasing, subject to the Standard Lease Terms ([Map 40](#)).

Locatable Minerals

Same as Alternative C.

Travel Management

Same as Alternative C.

Areas of Critical Environmental Concern

Same as Alternative B.

Wild and Scenic Rivers

Same as Alternative C, the Salmon Fork would not be suitable for designation under the Wild and Scenic Rivers Act.

2.7. Required Operating Procedures and Leasing Stipulations

The BLM has developed measures to protect resources called “Required Operating Procedures” (ROPs) and “Fluid Mineral Leasing Stipulations” (Leasing Stipulations) as part of this planning process. These measures 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 RMP/EIS. The ROPs are requirements, procedures, management practices, or design features that the BLM will adopt to protect resources. Leasing Stipulations are requirements to reduce impacts to natural resources from fluid mineral exploration and development. The ROPs and Leasing Stipulations

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generally do not restate requirements that already exist in regulations or laws. Regulations or laws may require conditions that are more stringent than those presented in this section.

The ROPs 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 RMP/EIS.

[ROPs](#) are common to Alternatives B, C, and D, and will be applied as appropriate for BLM actions and BLM-authorized activities including: FLPMA leases and permits; Special Recreation Permits; oil and gas activities; coal activities; renewable energy activities; mining Plans of Operation; and, authorizations for rights-of-way. For fluid mineral leasing activities, ROPs would apply in addition to the Standard Lease Terms and Leasing Stipulations. Only those ROPs concerning resources that are potentially affected by the action will be applied to permits and authorizations. The ROPs may be modified through site-specific analysis of subsequent authorizations. Modifications to ROPs may be appropriate if other measures are taken to protect resources that would result in the same or reduced impact.

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 National Environmental Policy (NEPA) analysis. Additional stipulations may be developed at that time.

Leasing Stipulations may be excepted, modified or waived by the [AO](#) 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.

[ROPs](#) Wild-11 through Wild-14 do not apply to the Upper Black River Subunit and are not included in this summary document. A full listing of the ROPs can be found in the Eastern Interior Draft Resource Management Plan and Environmental Impact Statement (BLM 2012).

2.7.1. Required Operating Procedures

Cultural and Paleontology

ROP C-1 For permitted activities, cultural resource protection and conservation will be consistent with 1) Sections 106, 110, and 101d of the National Historic Preservation Act (1966, as amended);

2) procedures under BLM's 1997 National Programmatic Agreement for Section 106 compliance or its successor agreement; and, 3) the 1998 Protocol for Managing Cultural Resources in Alaska between BLM-Alaska and the Alaska State Historic Preservation Officer (SHPO) or its successor agreement.

ROP C-2 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.

ROP C-3 The BLM will evaluate the impacts of proposed actions to known paleontological resources. 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.

Fish and Aquatic Species

ROP FA-1 No road crossings will be permitted in priority fish species spawning habitat, unless no feasible alternative exists.

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

- Accommodate a 100-year flood event, including bedload and debris;
- Maintain fish and aquatic organism passage;
- Maintain channel integrity;
- Accommodate mean bankfull channel widths; and,
- Incorporate adjacent reclamation (such as willow cuttings, wattles, brush layering) on the disturbed areas up and downstream of the abutments.

ROP FA-3 Application of pesticides and other toxicants will occur in a manner that does not prevent or retard attainment of desired conditions or adversely impacts priority aquatic species.

ROP FA-4 Drilling is prohibited in fish-bearing rivers and streams, as determined by the active floodplain; and fish-bearing lakes, except where the applicant can demonstrate on a site-specific basis that impacts would be minimal or it is determined by the [AO](#) that there is no feasible or prudent alternative.

ROP FA-5 When feasible, all water intakes will be screened and designed to prevent fish intake.

ROP FA-6 Reclamation plans for the rehabilitation of fish habitat as required under 43 CFR 3809.420(b)(3)(ii)(E) will focus on three objectives. Typically, these requirements would be satisfied through the development of a site-specific reclamation plan and on achievement of reclamation objectives. Bond release would be based on meeting specific measurable objectives outlined in a monitoring plan (43 CFR 3809.401(b)(3)). These objectives are:

1. Provide 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, it will be necessary to design a post-mining stream channel using morphological characteristics of the pre-disturbance channel and floodplain (such as bankfull and floodprone dimensions, meander patterns, design flows and velocities, riffle-to-pool ratios, substrate particle sizes, and so on); which could be derived from field surveys of the area, remotely sensed information, and/or information from adjacent watersheds that exhibit similar characteristics as the watershed proposed for mining.

2. Provide 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.
3. Provide instream habitat complexity similar to that of pre-disturbance levels through the use of instream structures (such as vortex rock weirs, cross-vane structures, and installation of root wads).

ROP FA-7

Within Riparian Conservation Areas and the Salmon Fork ACEC, baseline hydrological data adequate to characterize the seasonal flow patterns and discharge 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. Reclamation plans will be designed to result in rehabilitation of habitats within an accelerated timeframe (such as less than three years) and will focus on active revegetation and streambank stabilization techniques as the basis for reclamation design.

Forestry

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

ROP Forest-2 Timber sales will include buffers to prevent disturbance of priority fish species habitat and sedimentation into streams. Buffer widths will be dependent on harvest method, season of harvest, equipment used, slope, vegetation, and soil type. Winter operations will be considered in order to avoid the need for road building and reduce impacts to soils, vegetation, and riparian areas.

Hazmat and Waste Management

ROP Hazmat-1 Areas of activities will be left clean of all debris to minimize environmental contamination from solid waste.

ROP Hazmat-2 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.

ROP Hazmat-3 Wastewater should be managed in accordance with Title 18 Alaska Administrative Code, Chapter 72, (18 AAC 72) Wastewater disposal. Wastewater can be defined as human wastes (sewage) and gray water (wastewater from a laundry, kitchen, sink, shower, bath or other domestic sources). Pit privies are authorized in accordance with 18 AAC 72.020(b)(c)(i),

72.030 and all applicable updates. If these standards cannot be met, then special authorization may be given by the AO. Gray water may not be released in any waterbody, without authorization under the Alaska Pollutant Discharge Elimination System (APDES). Gray water may be filtered and released to the surface so as not to cause erosion, and the grey water released must maintain compliance with the [ADEC's](#) guidance.

ROP Hazmat-4 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.

ROP Hazmat-5 Transportation and storage of POLs will be handled in a safe manner to avoid impacts to the environment and human health. The storage area for any POLs must be approved by the AO.

ROP Hazmat-6 [POLs](#) that are transferred to remote locations for operations are to be stored within a containment area constructed to contain 110 percent of the volume of the largest container. The containment area must be lined with an impermeable liner which is free of cracks or gaps, compatible with the contents to be stored, and sufficiently impervious to contain leaks or spills. The containers shall be covered to eliminate the collection of rainwater within the containment area throughout the storage period.

ROP Hazmat-7 All hazardous materials/toxic substances must be disposed of in accordance with EPA and [ADEC](#) regulations at the time of disposal.

ROP Hazmat-8 Transfer of POLs to equipment will be completed in a secure manner to minimize the possibility of contamination to the surrounding environment. At a minimum, POL-type absorbent pads will be placed under the transfer location to catch overflow or assist the operator in containing a spill. If refueling cannot be avoided within riparian habitat, 500 feet of fish-bearing waterbodies, or 100 feet of non-fish bearing waterbodies; the responsible party must exercise caution while refueling to ensure no release of POLs into the waterbody. Equipment that has been identified as having a fluid leak must have a drip basin placed under the leak area to ensure no release to the surrounding environment or collection of rain water.

ROP Hazmat-9 Equipment maintenance by the responsible party may be allowed if it is necessary to operate equipment as described in the authorization. Equipment maintenance that has the potential to release fluids should be completed over an impermeable liner to ensure fluid migration to the environment does not occur.

ROP Hazmat-10 A Spill Prevention, Control and Countermeasure Plan (SPCC) will be written for all sites which have the potential to store 1,320 gallons or more of POLs. SPCCs will follow the requirements in 40 CFR 112 and state regulations.

ROP Hazmat-11 All spills will be contained and cleaned up in accordance with [ADEC](#) guidance as soon as the release has been identified, unless health and safety of personnel is at risk. ADEC discharge notifications and reporting requirements are outlined in [AS](#) 46.03.755 and 18 [AAC](#) 75 Article 3. The release of POLs to any waterbody must be immediately reported to ADEC, as soon as the person has knowledge of the release. The responsible party will contact the [AO](#) within 48 hours of a spill on public lands. Notifying the EPA may be required for discharges of oil, as required by 40 CFR 112.4.

Mineral Materials (Salable Minerals)

ROP MM-1 Use existing upland material sources that meet suitability and economic needs whenever possible. Using material from wetlands, lakes, and active or inactive floodplains will be avoided, unless no feasible upland alternative exists. Sales or permits for in-stream gravel extraction within an active channel will not be allowed in priority fish species spawning habitat.

ROP 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.

ROP 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.

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

Soils

ROP Soils-1 Save all organic material in a separate area from overburden (defined in 43 CFR 23.3 (d)) for future use.

ROP Soils-2 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.

ROP Soils-3 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.

ROP Soils-4 Design roads and trails for minimal disruption of natural drainage patterns.

ROP Soils-5 Roads and trails should avoid areas with unstable or fragile soils.

ROP Soils-6 Water bars will be placed across reclaimed roads. Spacing will be dependent on road gradient, soil erodibility, and other site-specific factors.

ROP Soils-7 Snow and ice bridges will be removed, breached, or slotted before spring break-up. Ramps and bridges will be substantially free of soil and debris.

ROP Soils-8 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.

Special Status Species

ROP SS-1 The planning area may contain or be identified with Special Status Species or their habitats. The BLM may require actions to avoid or minimize impacts to Special Status Species, pursuant to BLM policy and Endangered Species Act consultation.

ROP SS-2 Where practical, use may be redirected to protect Special Status Species habitat; to enhance indigenous animal population; or, to otherwise maintain public land health through avoidance of sensitive habitat. 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.

ROP SS-3 Where populations or individual sensitive status plant species are located, take measures to protect these populations or individuals through site-specific buffers or management prescriptions. Route new roads and trails away from known sensitive plant communities, with minimum 100-foot buffers; and minimize summer cross-country [OHV](#) travel where there are sensitive plants.

Subsistence

ROP Sub-1 For externally generated actions, the BLM may require applicants to provide information to potentially affected subsistence communities regarding the timing, siting, and scope of the proposed activity and to consult with potentially affected subsistence communities regarding ways to minimize impacts to subsistence. If consultation occurs, the applicant may be required to provide documentation of their consultation efforts to the BLM.

Vegetation and Non-Native Invasive Species

ROP Veg-1 All vegetation treatments and revegetation of surface disturbance will require an approved site-specific plan designed to prevent the introduction of non-native invasive plants (NIP), and achieve desired conditions. 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 NIP, desired vegetative conditions (based on the ecological capability of the site), treatment methods, measures for preventing introduction and spread of NIP, 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.

ROP Veg-2 Existing roads and trails will be utilized for access where feasible, rather than creating new roads and trails. All road or trail construction must include a plan for reclamation similar to a vegetation treatment plan in ROP Veg-1 above. It should also include best management practices for revegetation of cuts and fills and minimize off-site sediment transport impacts. Construction of road or trails in wetlands and floodplains will be avoided.

ROP Veg-3 Destruction of the vegetative mat and associated vegetation will not be authorized, unless the AO determines that no feasible alternative exists. In those cases the [AO](#) will require that the vegetative mat and topsoils be salvaged and appropriately stored and used for reclamation. If the AO decides that vegetative mat and topsoils cannot be salvaged, other measures to protect vegetation and soils will be considered. Plans for revegetation of surface disturbances will be clearly addressed during authorization of an action.

ROP Veg-4 Design and locate permanent facilities to minimize the development footprint.

ROP 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.

ROP 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.

ROP 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.

ROP NIS-4 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 2011) to reduce the introduction and spread of Aquatic Nuisance Species.

ROP 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.

Visual Resource Management (VRM)

ROP VRM-1 To the extent practicable, all facilities and activities will be located away from roads (except access roads), rivers, trails, and other transportation features; using distance to reduce the facility's visual impact along travel corridors.

ROP VRM-2 All facilities and activities will be designed to meet the visual resource management class, using proper siting and location so that natural features of vegetation and landforms provide screening from travel corridors and other key observation points, and to blend with the natural surroundings.

ROP VRM-3 The modification or disturbance of landforms and vegetative cover will be minimized. Facilities and activities will be designed to reduce unnecessary disturbance.

ROP VRM-4 Facilities and activities will be designed so their shapes, sizes, colors, and textures harmonize with the scale and character by repeating the elements of line, form, color and texture of the surrounding landscape, where possible.

ROP VRM-5 In open exposed landscapes, development will be located in the opposite direction from the primary scenic views, where feasible.

Water, Riparian, and Wetland

ROP Water-1 Where instream operations are authorized, streams must be diverted using an appropriately sized bypass channel.

ROP 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.

ROP 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.

ROP Water-4 Streams altered by channeling, diversion, or damming will be restored to a condition that will allow for proper functioning of the riparian zone and stream channels. Active streams will be returned to the natural water course or a new channel will be created at its lowest energy state (valley bottom) that approximates the old natural channel in shape, gradient, and meander frequency using a stable channel design.

ROP Water-5 All permitted operations will be conducted in such a manner to not block any stream or drainage system.

ROP Water-6 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.

ROP Water-7 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.

ROP Water-8 State-designated stream crossings will be used where possible for vehicle travel. Stream crossings are online at <http://www.habitat.adfg.alaska.gov/gpvehstreamxings.php>, noted under the General Permits Index-Authorized Vehicle Stream Crossings

ROP Water-9 Rivers and streams will be crossed by vehicles at shallow riffles from point bar to point bar, where possible.

ROP Water-10 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, based on Rosgen channel type evaluations.

ROP Water-11 Disturbed stream banks will be recontoured and revegetated (or other protective measures will be taken) to prevent soil erosion into adjacent waters.

Wildland Fire Management

ROP FM-1 Permittees and casual users will be held financially responsible for any actions or activity that results in a wildland fire. Costs associated with wildland fires include (but are not limited to) damage to natural or cultural resources and costs associated with any suppression action taken on the fire.

ROP FM-2 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.

ROP FM-3 Gas-powered equipment must be equipped with manufacturer approved and functional spark arrestors.

ROP FM-4 To avoid the potential impacts to aquatic life, the BLM prohibits the use of fire retardant, except when necessary to protect human life, permanent year-round residences, national historic land-marks, structures listed or eligible for the National Register of Historic Places, government facilities, other designated sites or structures, or high-value resources on adjacent lands. Water will be used instead of fire retardant where possible or appropriate. The use of fire suppressant foams is prohibited. Fisheries staff will be involved with decisions to deliver chemical retardant, additives to, or grey water discharge into surface waters.

ROP FM-5 The use of tracked or off-road vehicles in wildland fire suppression or management activities will be conducted in a manner that does not cause erosion, riparian area damage, water quality or fish habitat degradation, or contributes to stream channel sedimentation.

ROP FM-6 Off-road use of heavy equipment and other motorized vehicles requires approval of the AO.

ROP FM-7 Rehabilitate burned areas in accordance with the wildland fire-specific rehabilitation plan provided by the Field Office to the suppression agency.

ROP FM-8 Firelines to mineral soil will not be built in or around riparian areas; unless they are needed to protect life, property, and/or wetland resources. Use natural features as preferred firebreaks over firelines constructed to mineral soil. When possible, use hand crews to construct firelines within (or adjacent to) riparian areas.

ROP FM-9 To the extent practicable, select the location for incident bases, camps, helibases, and so on to avoid riparian areas.

Wildlife

ROP Wild-1 Design pipelines and 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 feasible, maintain a minimum distance of 500 feet between above-ground pipelines and roads.

ROP 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 exact facility location and facility construction.

ROP Wild-3 Whenever possible, operations that require vegetation removal will avoid the migratory bird nesting period of May 1 to July 15 (USFWS Advisory: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds. September 2007). 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.

ROP 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.

ROP Wild-5 Guy-wired apparatus, regardless of purpose, will be marked in accordance with the guidance provided by the [USFWS](#) Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers, dated September 14, 2000, or a more current or contemporaneous version of that guidance.

ROP Wild-6 To minimize the potential for disease transmission to wildlife, the use of domestic sheep, goats, alpacas, llamas, and other similar species will not be authorized in conjunction with BLM authorized activities in Dall sheep habitat.

ROP Wild-7 Activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities or Dall sheep lambing (May 10 through June 1). 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 based on actual caribou or Dall sheep occupancy of the area.

ROP Wild-8 Within the Fortymile and White Mountains caribou calving and postcalving ranges ([Map 90](#)), 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.

ROP 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.

ROP Wild-10 From May 1 through August 31, avoid sustained human activity within one-quarter mile of trumpeter swan nests and rearing ponds. No activity will commence prior to May 15 and, if necessary, qualified personnel will conduct a preliminary site survey within the two-week period prior to the projected start date of the activity to determine trumpeter swan presence. If present, short-term activities will be delayed until after nesting trumpeter swans and cygnets have left the habitat. Exceptions may be granted by the AO, following NEPA analysis, if no feasible alternative exists.

Priority Raptor ROPs

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 ROP Wild-16 through ROP Wild-20.

ROP Wild-15 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 feasible and to minimize habitat loss to the extent feasible. Of particular concern for avoidance are ponds, lakes, streams, wetlands, and riparian habitats.

ROP Wild-16 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.

ROP Wild-17 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. Exceptions may be granted by the AO if no feasible alternative exists.

ROP Wild-18 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. Exceptions may be granted by the AO if no other feasible alternative exists.

ROP Wild-19 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, unless an exception is granted by the AO.

ROP Wild-20 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. Exceptions may be granted by the AO if no feasible alternative exists.

2.7.2. Fluid Mineral Leasing Stipulations

The following table lists the leasing stipulations which would be applied to any lease sales in the Eastern Interior Planning Area.

Table 2.2. Fluid Mineral Leasing Stipulations

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Goal: 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
Goal: 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 the 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
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
Goal: 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
Goal: Minimize impacts to wildlife species from BLM-authorized activities.		

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Stipulation 5: No exploration activities from May 10 through June 1 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).	Identified caribou calving/postcalving and Dall sheep habitats	<p>Exception: The AO may grant an exception if the lessee demonstrates that calving caribou or Dall sheep are not currently using the area.</p> <p>Modification: Season may be shortened or extended based on actual occupancy of the area.</p> <p>Waiver: This stipulation may be waived if caribou migratory patterns change and the areas are no longer used for calving.</p>
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	<p>Exception: The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative.</p> <p>Modification: Season may be adjusted based on actual nest occupancy.</p> <p>Waiver: None</p>
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	<p>Exception: The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative.</p> <p>Modification: Season may be adjusted based on actual nest occupancy.</p> <p>Waiver: None</p>

2.8. Comparison of Impacts

The following table summarize the impacts that could occur in the Upper Black River Subunit due to implementation of the [RMP](#). This table only addresses impacts from the programs discussed in this summary document. For a full disclosure of impacts, see the Eastern Interior Draft Resource Management Plan and Environmental Impact Statement (BLM 2012).

Table 2.3. Upper Black River Subunit: Comparison of Impacts

Program or Resource	Alternative A	Alternative B	Alternative C	Alternative D
Fish and Aquatic Species	<p>Fish and aquatic resources would be primarily affected by surface-disturbing activities which alter stream channels, remove or damage riparian vegetation, or result in soil erosion and sedimentation to aquatic habitat. Activities causing extensive stream channel or riparian alteration would likely result in unavoidable loss of fish and aquatic habitat, with both short- and long-term adverse impacts. Invasive species can adversely effect fish and aquatic resources through habitat change, predation, parasitic behavior, disease, competition, and hybridization. Initially, adverse impacts would be localized since the distribution of invasive species would be highly localized; if invasive species became widely established, however, major adverse impacts would be expected. The initial introduction of aquatic invasive species into the planning area would have adverse impacts at the local level; as time progressed long-term, major adverse impacts would be expected as invasives spread across the planning area. Measures proposed in the RMP aimed at limiting the introduction and spread of invasive species would benefit fish and aquatic resources. Management to avoid or minimize impacts to wilderness characteristics would potentially benefit fish and aquatic resources by minimizing surface-disturbing activities and decreasing recovery time from disturbance. Wildland fire directly and indirectly impacts fish populations and their prey through increased siltation, and changes in water quality and temperature. Wildland fire can change the nutrient input to water systems and changes to permafrost status can lead to altered hydrology. Fish will generally re-invade burned areas rapidly where movement is not limited by barriers. Fish population recovery generally tracks the increase in primary and secondary production that occurs in the early postfire period. Where sediment is continually delivered into the stream, there could be short-term negative effects on fish and macro-invertebrate communities.</p>			
	No Riparian Conservation Areas (RCAs) are identified.	28 RCAs would provide additional protection to high priority fish habitat.	13 RCAs would provide additional protection to high priority fish habitat.	Five RCAs would provide additional protection to high priority fish habitat.
	The subunit is closed to leasable minerals. There would be no impacts to fish.		Effects to overwintering fish from winter seismic surveys would be localized and would have little effect on fish populations.	
	There would be no effects to fish and aquatic resources from locatable minerals as the entire subunit would be closed to this use.		4,144 miles of stream would be open to mining, with 559 (fourteen percent) of these miles occurring in RCAs and 1,000 miles in the Salmon Fork ACEC. Mining is not expected to occur due to lack of mineral potential. If development occurred, impacts would be moderate and short-term within the RCAs and ACECs, and moderate and long-term in other areas, resulting in decreased fish populations and habitat loss at the local level.	4,144 miles of stream would be open to mining with 360 (nine percent) of those stream miles occurring in RCAs and 1,000 miles in the Salmon Fork ACEC. Mining is not expected to occur due to lack of mineral potential. Impacts would be similar to Alternative C except 200 fewer miles of stream would be within RCAs.
	Impacts from unrestricted use of OHVs would likely be minimal. Most travel is by	OHV use would be limited by season and weight. Impacts would likely be minimal. Most travel is by	OHV use would be limited by weight. Impacts would likely be minimal. Most travel is by boat, snowmobile, or aircraft which has little impact. These alternatives would provide more protection to	

Program or Resource	Alternative A	Alternative B	Alternative C	Alternative D
	boat, snowmobile, or aircraft, which has little impact on fish and aquatic habitat.	boat, snowmobile, or aircraft which has little impact. This alternative would be slightly more protective than Alternative A.	fish and aquatic habitat than Alternative A, but less than Alternative B.	
	Not addressed.	Fish and aquatic habitats would benefit, from designation of the Salmon Fork ACEC (621,000 acres) because the habitat would generally remain intact. The Salmon Fork would be recommended for designation as a WSR, providing additional protection of high-value fish and aquatic resources.	Travel management and locatable minerals decisions in the Salmon Fork ACEC (621,000 acres) would be less restrictive than in Alternative B providing less protection to fish and aquatic habitat. Fish and aquatic habitat benefit, but to a lesser degree than Alternative B.	Management in the Salmon Fork ACEC would be less protective to fish and aquatic habitat than Alternative C. high-value habitats within the ACEC would rely on RCA management for protection. Fish and aquatic habitat would benefit less than under Alternatives B and C.
Vegetation	<p>Management to maintain soil, water quality, fish habitat, Special Status Species, visual resources, wilderness characteristics, subsistence, and special designations will generally benefit natural diversity of vegetative communities. The effects of solid leasable minerals, salable minerals, lands and realty, and renewable energy is predicted to be small due to the limited activity expected. The ROPs would reduce potential impacts to vegetative communities in Alternatives B, C, and D. RCAs would reduce impacts to riparian vegetation where they are identified. The potential impact of introduction and spread of non-native plants (NIP) is large and most often occurs in conjunction with surface-disturbing activities or use of motorized vehicles. Requirements for weed-free hay, mulch, seed, and gravel sources would reduce potential for establishment of NIP. Cross-country OHV use, especially in recently burned areas, may represent the largest potential impact to vegetative communities, through the spread of NIP. Wildland fire is the major determinant of vegetative communities. A natural fire regime is considered desirable and is maintained for most of the planning area through the Limited Management Option. Areas near the road system and communities are typically within Modified, Full, or Critical fire management options and fire suppression will artificially modify the fire regime in these areas. Greater public presence and establishment of human infrastructure, which could result from decisions in this plan, often leads to greater fire suppression which can cause deviations away from normal fire regime. Effects to vegetation of a longer fire return interval include older stand ages, changes in community composition, trend towards less productivity and growth, and larger areas of similar vegetation. Climate change is predicted to result in major changes to vegetation in the next 30 years as fire frequency increases. Activities which facilitate the spread of NIP will compound the effects of climate change and the regional increase in prevalence of NIP.</p>			
	The subunit is closed to leasable minerals. There would be no impact to vegetation.		Clearing of seismic lines causes direct destruction of vegetation and recovery of vegetation is slow. Lines may be used for OHV travel, which can exacerbate impacts and slow or prevent vegetation recovery. Impacts would be localized and limited due the low level of exploration anticipated.	
	The subunit is closed to locatable minerals. There would be no impacts to vegetation.	No mining is expected to occur in the subunit. If mining did occur, potential impacts both direct loss of habitat and changes in human use due to improved access. Placer mining disturbs riparian and near-stream vegetation and the stream channel which may result in downstream effects on riparian vegetation. Mining typically changes the vegetation from late seral to early seral communities. Recovery		

Program or Resource	Alternative A	Alternative B	Alternative C	Alternative D
		of habitats is highly variable and may be very slow. Aufeis formation can result in erosion and prevent or slow vegetation growth. It may require 50 years or more (following end of mining) for riparian habitat quality to approach pre-mining conditions.		
Wilderness Characteristics	Not Addressed	Wilderness characteristics would be protected on more than ninety-nine percent of the subunit; all of the lands with wilderness characteristics.	Wilderness characteristics would be protected on twenty-six percent of the subunit. Lack of activity and other management actions would indirectly protect wilderness characteristics on the remaining seventy-four percent. Naturalness may be impacted over the short-term in localized areas.	Wilderness characteristics would be not be directly protected. Lack of activity and other management actions would indirectly protect wilderness characteristics on most of the subunit. Naturalness may be impacted over the short-term in localized areas.
Wildlife	Management to maintain soil and water resources, Special Status Species, vegetative communities, visual resources, wilderness characteristics, and subsistence will generally benefit wildlife and their habitat, as would management of NIP. The effects of solid leasable minerals, salable minerals, lands and realty, and renewable energy are anticipated to be small due to the limited activity expected. The ROPs (Section 2.7) will apply in Alternatives B, C, and D; and, would reduce potential impacts to habitat and many wildlife species. Measures to minimize impacts to fish habitat will generally benefit wildlife and habitat because of the high value of riparian habitats to many species. RCAs will reduce impacts to riparian vegetation, especially stream bank vegetation, resulting in lesser impacts to wildlife in general, and more specifically to BLM-Alaska sensitive species and Bird Species of Conservation Concern. NIP have the potential for impacts to wildlife due to alteration of habitat. Introduction and spread of non-native animal species is also a potential impact. Alternatives B, C, and D include measures to monitor and control the spread of invasive species. These measures will reduce impacts, but some increased abundance of NIP are inevitable and loss of habitat for native wildlife species can be expected. Roads and trails (and associated vehicle use) are recognized as the primary avenues of spread of NIP. Alternatives which minimize creation of roads and trails, and off-trail summer use of OHVs will reduce potential spread and impacts of NIP. Treatment of NIP infestations may impact wildlife habitats, but generally less than continuation and spread of NIP at the site.			
	The subunit is closed to locatable minerals. There are no existing mining claims. There would be no impacts to wildlife.		Management of the Salmon Fork ACEC and RCAs would reduce impacts of mining on wildlife habitat. In other areas, exploration or production could potentially create local displacement and some fragmentation of habitat. Given the limited activity expected, impacts would be local in extent.	Impacts will be similar to those in Alternative C, but could potentially higher in the Salmon Fork drainage. Impacts would depend on levels of exploration, development, and claim staking.
	The subunit is closed to leasable minerals. There would be no impacts to wildlife.		Winter seismic exploration could create local displacement of wildlife and some fragmentation of habitat.	
	The unrestricted use of motorized vehicles could	Effects would be similar to Alternative A, but more protective.	Effects would be similar to Alternative B, except there would not be a seasonal restriction in the Salmon Fork ACEC; more area	

Program or Resource	Alternative A	Alternative B	Alternative C	Alternative D
	cause localized impacts to habitat. Impacts would be minimal. Most travel is by boat, snowmobile, or aircraft, which has little impact on wildlife habitat.	Seasonal OHV restrictions in the Salmon Fork ACEC and OHV weight limitations on all lands would reduce potential habitat disturbance.	would be available for summer motorized travel. As a result, impacts to habitat may increase slightly relative to Alternative B.	
	Not addressed.	The Salmon Fork ACEC would maintain habitat for Porcupine caribou, bald eagle, and other wildlife. Management of the Salmon Fork as a “wild” river would benefit wildlife, including a far northern population of nesting bald eagles.	Travel and leasable minerals decisions in the Salmon Fork ACEC would be less restrictive providing less protection to wildlife habitat. Wildlife would benefit, but to a lesser degree than Alternative B. Impacts to nesting bald eagles are expected to be low.	Management in the ACEC would be less restrictive than Alternative C, providing less protection to wildlife habitat. There may be potential for impacts to nesting bald eagles and other wildlife, if mining claims were established or mineral leasing occurred.
Locatable Minerals	The entire subunit would be closed to locatable minerals, precluding any opportunity to explore and develop locatable minerals. Their benefits to society would be unavailable for the foreseeable future. Mineral potential is very low and mining activity would be unlikely, even if lands were opened to mineral entry.		The entire subunit would be open to locatable mineral entry allowing an opportunity to explore for locatable minerals. Mineral potential is very low and mining activity is unlikely.	
Travel Management	There would be no effect from leasable minerals because the entire subunit is closed to mineral leasing.		Cleared seismic trails could be used as the beginning of a network of winter trails, potentially increasing access into the southern part of the subunit. Effects would be minimal due to the limited amount of exploration.	
	There are no OHV designations and motorized use is unrestricted.	OHV use would be limited by weight and season of use. Effects would be minimal as the subunit is inaccessible except by boat, aircraft, or snowmobile. If resource damage occurs, sustainable trail construction or area closures could occur.	OHV use would be limited by weight. Effects would essentially be the same as Alternative B.	
	Not addressed.	The Salmon Fork ACEC would result in restrictions on summer use of OHVs. Impacts would be negligible, as the ACEC is remote and difficult to access. If the Salmon Fork were designated as a “wild” river, there could be	The Salmon Fork ACEC could effect travel management if additional restrictions were placed on OHV use. This would be unlikely, however, as the ACEC is remote and difficult to access.	

Program or Resource	Alternative A	Alternative B	Alternative C	Alternative D
		limitations on motorized travel in the river corridor.		
Wild and Scenic Rivers	Not addressed.	The Salmon Fork would be recommended suitable for designation as “wild,” protecting its free-flow and ORVs until Congress made a decision on designation. surface-disturbing activities may impact water quality and outstandingly remarkable wildlife values.	The Salmon Fork would not be recommended as suitable for designation as a “wild” river.	
Subsistence	Alternative A would not significantly restrict subsistence use by communities in and adjacent to the planning area, as impacts to subsistence resources would be negligible. Impacts to subsistence species are expected to be localized and temporary and are not expected to impact resources at the population level. No impacts to access by subsistence users are anticipated.	Alternative B would not significantly restrict subsistence use of or access to fish, wildlife and vegetative resources by residents in the subunit. Most impacts to subsistence resources would be beneficial, and any impacts by way of the limited amount of development allowed and expected to occur under this alternative would be minimized by Fluid Mineral Leasing Stipulations and ROPs (Section 2.7).	Alternative C would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be negligible, and any impacts from the limited amount of development allowed to occur would be minimized by the Fluid Mineral Leasing stipulations and ROPs. Impacts to subsistence species would be localized and temporary, and are not expected to impact resources at the population level. No impacts to access by subsistence users are expected.	Alternative D would not significantly restrict subsistence use by communities in or near the planning area given anticipated level of development.

Acronyms and Glossary

AAC:	Alaska Administrative Code
ACEC:	Area of Critical Environmental Concern: An area within the public lands where special management attention is required to protect important historic, cultural, or scenic values, fish and wildlife or natural systems or processes, or to protect life and safety from natural hazards.
ADEC:	Alaska Department of Environmental Conservation
ADF&G:	Alaska Department of Fish and Game
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.
ANCSA:	Alaska Native Claims Settlement Act
ANILCA:	Alaska National Interest Lands Conservation Act
AO:	Authorized Officer
AS:	Alaska Statute
BLM:	Bureau of Land Management
CFR:	Code of Federal Regulations
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”.
EIS:	Environmental Impact Statement
FLPMA:	Federal Land Policy and Management Act
NEPA:	National Environmental Policy Act
NIS:	Non-native invasive species
OHV:	Off-highway Vehicle: 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 (43 CFR 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 and ATV. Aircraft are not OHVs.

POL:	Petroleum, oils, and lubricants
RCA:	Riparian Conservation Area
RMP:	Resource Management Plan
ROP:	Required Operating Procedure
SHPO:	State Historic Preservation Office
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.
SSS:	Special Status Species
USFWS:	United States Fish and Wildlife Service
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 1500 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.
VRM:	Visual Resource Management
WSR:	Wild and Scenic River: A river that is part of the National Wild and Scenic River System.

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Appendix A. Maps

1. Map 4: Land Status – Upper Black River Subunit
2. Map 11: Riparian Conservation Areas - Upper Black River Subunit, Alternative B
3. Map 12: Riparian Conservation Areas - Upper Black River Subunit, Alternative C
4. Map 13: Riparian Conservation Areas - Upper Black River Subunit, Alternative D
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