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

Supplemental Draft Environmental Impact Statement for the Haines Amendment to the Ring of Fire Resource Management Plan

May 2019

Prepared by:
U.S. Department of the Interior
Bureau of Land Management

In Cooperation with:
Haines Borough
Skagway Borough

Estimated Lead Agency Total Costs Associated with Developing and Producing this Supplemental Draft EIS: $328,619







The Bureau of Land Management Today

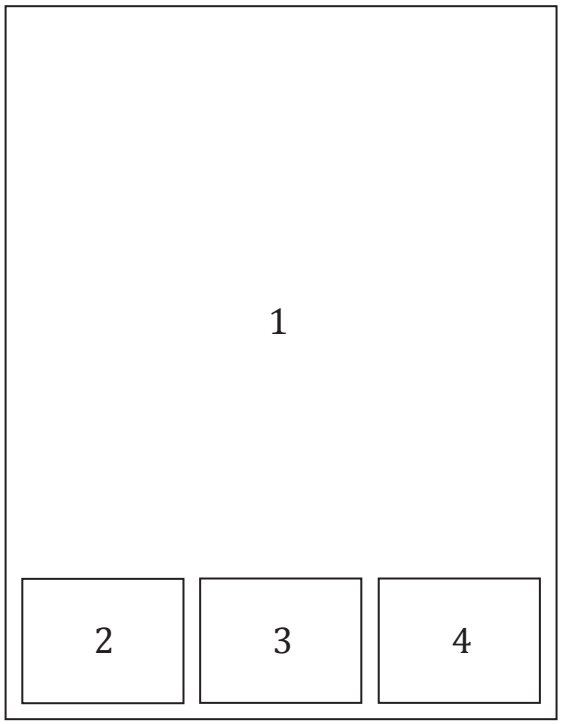
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To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

Our Mission

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

DOI-BLM-AK-A020-2018-0023-EIS



BLM Cover Photos

1. Aerial view of the Takinsha Mountains area in the southern portion of the Haines Block planning area.
2. Radio collared mountain goat near Haines, Alaska. (photo courtesy of Alaska Department of Fish and Game)
3. Helicopter at West Creek Glacier area.
4. Norse Glacier area in the northern portion of the Haines Block planning area.

BLM/AK/PL-19/003+1610+A020

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7504
www.blm.gov/alaska

In Reply Refer To:
1610 (AKA020)

FEB 19 2019

Dear Reader:

Attached for your review and comment is the Draft Resource Management Plan Amendment/Supplemental Draft Environmental Impact Statement (Draft RMPA/SDEIS) for the Bureau of Land Management Alaska (BLM) Glennallen Field Office. BLM prepared this document in consultation with cooperating agencies, and in accordance with the National Environmental Policy Act of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, implementing regulations, the BLM's Land Use Planning Handbook (H-1601-1), and other applicable law and policy.

The planning area consists of about 920,000 acres of land which includes about 326,000 acres of public lands managed by the Glennallen Field Office. All of the land is located in the Haines and Skagway Boroughs. When approved, this RMP Amendment will revise the Ring of Fire Resource Management Plan and will guide the management of BLM-managed public lands into the future. The Ring of Fire Resource Management Plan, Haines Amendment and supporting information is available on the project web site at: https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/rof-haines-amendment.

The BLM encourages the public to provide information and comments pertaining to the analysis presented in the Draft RMP/SDEIS. We are particularly interested in feedback concerning the adequacy and accuracy of the proposed alternatives, the analysis of respective management decisions, and any new information that would help the BLM as it develops the plan. In developing the Proposed RMP/Final EIS, which is the next phase of the planning process, the decision-maker may select various management decisions from each of the alternatives analyzed in the Draft RMPA/SDEIS for the purpose of creating a management strategy that best meets the needs of the resources and values in this area under the BLM multiple use and sustained yield mandate. As a member of the public, your timely comments on the Ring of Fire Resource Management Plan, Haines Amendment, will help formulate the Proposed RMPA/Final EIS. Comments will be accepted for ninety (90) calendar days following the Environmental Protection Agency's (EPA) publication of its Notice of Availability in the *Federal Register*. The BLM can best utilize your comments and resource information submissions if received within the review period.

Comments may be submitted electronically, by mail, or in person. To facilitate analysis of comments and information, the BLM encourages you to submit comments in electronic format.

Email comments to: BLM_AK_AFO_ROF_Amend@blm.gov

Mail comments to: Glennallen Field Office, Attention—Haines Amendment
P.O. Box 147, Glennallen, Alaska 99588-0147

Fax comments to: (907) 822-7335

Hand-deliver comments to: Glennallen Field Office
Mile 186.5 Glenn Highway
Glennallen, Alaska 99588

Your review and comments on the content of this document are critical to the success of this planning effort. If you wish to submit comments on the Draft RMPA/SDEIS, we request that you make your comments as specific as possible. Comments will be more helpful if they include suggested changes, sources, or methodologies, and reference to a section or page number. Comments containing only opinion or preferences will be considered and included as part of the decision making process, although they will not receive a formal response from the BLM.

Before including your address, phone number, email address, or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Public meetings to provide an overview of the document, respond to questions, and take public comments will be announced by local media, the BLM website, and/or public mailings at least fifteen (15) days in advance. A public meeting will be scheduled for the Haines Borough at a date and time yet to be determined.

Copies of the Draft RMPA/SDEIS have been sent to Federal, state and local government agencies in the affected areas. A link to the Draft RMPA/SDEIS can be found on the BLM website at https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/rof-haines-amendment. Copies are also available for public inspection at these BLM locations:

Glennallen Field office
Mile 186.5 Glenn Highway
Glennallen, Alaska

Anchorage District Office
4700 BLM Road
Anchorage, Alaska 99507

Thank you for your continued interest in the Ring of Fire Resource Management Plan, Haines Amendment. We appreciate the information and suggestions you contribute to the planning process. For additional information or clarification regarding this document or the planning process, please contact Bruce Loranger, Planning and Environmental Coordinator, (907) 267-1221 or Thomas Heinlein, Anchorage District Manager, at (907) 267-1205 or (800) 478-1263.

Sincerely,

Ted A. Murph
Acting State Director

EXECUTIVE SUMMARY

Introduction

The Bureau of Land Management (BLM) Glennallen Field Office has prepared this Supplemental Draft Environmental Impact Statement (EIS) for the Haines Amendment to the Ring of Fire Resource Management Plan (RMP).

The Haines Planning Area encompasses approximately 950,000 acres in Southeast Alaska, bound by the Canadian Border to the north and to the west, Glacier Bay National Park to the southwest, and the Tongass National Forest to the south and to the east. This Planning Area consists mainly of steep and remote mountainous terrain, with bedrock and glaciers that restrict road and trail access. Of the total acreage within the Planning Area, the BLM manages approximately 326,000 acres. The size of the Planning Area has changed since the 2008 signing of the Ring of Fire Record of Decision (ROD) and Approved Resource Management Plan due to the conveyance of several sections of BLM-managed lands to the State of Alaska. All BLM-managed lands in the Planning Area are currently selected by the State of Alaska or Native Corporations. Until the selections are relinquished or conveyances are finalized, State- and Native-selected lands will continue to be managed by the BLM. Based on the State's current selection priority, the BLM believes that some of the lands closest to communities, roads, and infrastructure could be conveyed to the State of Alaska, and more remote parcels could remain under Federal management indefinitely.

The Supplemental Draft EIS was prepared using the BLM's planning regulations and guidance issued under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), and under the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500-1508), BLM's NEPA Handbook 1790-1 (January 2008), and BLM's Land Use Planning Handbook 1601-1 (March 2005).

Purpose and Need

The purpose of this planning effort is to identify which, if any, designations, associated management practices, and implementation actions best fulfill the resource needs and multiple-use demands within the Haines Planning Area.

Action is needed to re-evaluate recreation and visitor services designations in the Planning Area to account for changes in BLM recreation policy. Action is also needed to comply with the direction in the Ring of Fire ROD, which deferred a final determination as to the establishment of an Area of Critical Environmental Concern (ACEC) for the Haines Block. In the fall of 2017, a multi-year BLM-funded study of goat and bear habitat was completed, prompting the need for a Supplemental Draft EIS.

Decisions to be Made

The land use planning-level decisions to be made through this plan amendment process include whether to:

- Retain the Special Recreation Management Area (SRMA) designation in the North Block.
- Reduce the acreage of the SRMA in the North Block.
- Establish an Extensive Recreation Management Area (ERMA) designation in the Planning Area.
- Establish ACECs in the Planning Area.

The implementation-level decisions to be made through this plan amendment process include whether to:

- Retain the Monitoring and Control Area (MCA) for wildlife studies.
- Establish a maximum number of authorized annual helicopter-supported recreation landings.

Issues

This Supplemental Draft EIS addresses the following issues based on the BLM's management concerns, and through scoping input received from Federal, State, and local agencies, and the public (refer to Chapter 5):

- How would permitted helicopter-supported recreation activities impact mountain goats and their habitat?
- How would backcountry users be affected by possible increases of permitted helicopter-supported recreation operations and landings?
- How would air quality and climate change be affected by permitted helicopter-supported recreation operations?
- How would decisions affect recreational users reliant upon helicopter support and operations?
- How would special designations, such as an ACEC, SRMA, ERMA, or MCA, affect overall land management in the area?
- How would an increase in helicopter-supported recreation landings and associated commercial operators affect jobs or household incomes within the Planning Area?
- How would decisions in this RMP affect minority or low-income populations?
- How would helicopter-supported recreation activities affect the availability of culturally important mountain goat wool for ceremonial dance blankets or "Chilkat Blankets" made by local Tlingit weavers?
- How would helicopter-supported recreation activities affect properties of religious and cultural significance identified by local tribes?
- How would summer helicopter-supported recreation on glaciers or ice patches affect potential discovery of archaeological resources?

Alternatives

The 2012 Ring of Fire Draft RMP Amendment/Draft EIS evaluated four alternatives. Alternative A (No Action Alternative) represents the continuation of management practices at the 2009 level. Alternatives B, C, and D describe proposed changes to management based on information available in 2012.

This Supplemental Draft EIS contains information from studies conducted between 2012 and 2017. Those studies facilitated the development of three supplemental action alternatives: Alternatives E, F and G. These supplemental action alternatives account for information obtained over the past 10-years and from comments provided by the public related to the previous draft. Because the 2017 study provides new information that the first three action alternatives were not analyzed against, the previous action alternatives analyzed in the Draft EIS will not be carried forward for consideration, as they no longer fully meet the purpose and need of the proposal. Thus, the three supplemental alternatives (Alternatives E, F, and G) supplement the three action alternatives (Alternatives B, C, and D) found within the 2012 Draft EIS. This Supplement compares the new supplemental alternatives to the previous Draft's action alternatives to assist the reader in understanding the development of this document. Under all alternatives, the BLM would manage the public lands in accordance with all applicable laws, regulations, and BLM policies and guidance. For a complete discussion of alternatives, see Chapter 2 of this Supplemental Draft EIS.

Alternative E –
This alternative would establish a 77,797 acres ACEC with a special designation as a Resource Natural Area (RNA) within the northwest portion of the Planning Area. The boundary would be drawn to follow drainages in the area and to take in the area identified as being of cultural significance to the federally recognized tribes. The remaining areas in the North and South Blocks would be designated as ERMAs. The total number of authorized helicopter landings in the Planning Area would be maintained at 2,700 annually (maximum 2,400 summer, 300 winter). This alternative would lift the 98,004-acre MCA in the North Block.

Alternative F –
The current SRMA designation for the North Block area would be changed to an ERMA and extend to BLM-managed lands in the South Block. The 98,004-acre MCA would be retained for a period of five years following the signing of the ROD to provide a monitoring and control area for mountain goat studies conducted jointly between the BLM and the Alaska Department of Fish and Game (ADFG). After the five-year period expires, the MCA would be lifted and permit applications would be accepted for review through site-specific NEPA analysis prior to any new authorizations.

Future landing authorizations would be contingent on the results of the mountain goat study efforts. The total number of authorized helicopter landings on BLM-managed lands in the Planning Area would be set to a maximum of 6,000 landings annually during the summer and winter (maximum 3,000 summer and 3,000 winter).

Alternative G – (Agency Preferred Alternative)
This alternative will designate part of the western portion of the northern block (65,467 acres) as a SRMA. These lands would be managed with an emphasis on opportunities for backcountry recreation and to protect, conserve, or restore lands or habitat in support of wildlife-dependent recreational activities. The SRMA would focus on primitive backcountry recreation activities while considering future enhanced access, particularly in cooperation with partners to provide for improved trail access and maintenance of riverine access points and opportunities. No helicopter-supported recreation landings or Unmanned Aerial System (UAS) use in conjunction with Special Recreation Permits (SRP's) would be permitted within the SRMA. Fixed wing aircraft access and landings, for both permitted commercial and personal use activities would be allowed. Temporary structures and camps in support of traditional or recreational use would be allowed. Backcountry cabins in support of the SRMA objective may be considered within the SRMA.

The total number of permitted landings would increase in the Planning Area to a maximum of 11,000 landings annually within both the North and South blocks, or a maximum of 5,500 summer and 5,500 winter landings. During the first year, a maximum of 1600 winter permits would be allocated within buffered high-use winter mountain goat habitat. Map 12 in Chapter 7 illustrates the 1,500 meter buffered, high-use winter mountain goat habitat. Winter landings outside of high use mountain goat habitat would not count toward the total number of permit allocations, up to 5,500 maximum landings annually. Permit utilization by all operators, combined, of 75 percent over three years, may trigger a permitting step increase within buffered high use mountain goat winter habitat, if goat monitoring indicates goat populations are healthy (see Table 2.2). Additionally, 5,500 summer landings would be permitted annually. A maximum of 1600 summer landings would be allocated in the first year. Permit utilization by all operators together of 75 percent over three years, may trigger a permitting step increase in summer allocations. The BLM in cooperation with the ADFG would consider incremental increases to permit allocations if operator(s) are in good standing and there are no concerns with mountain goat populations or trends.

Environmental Consequences

Alternative E would maintain the current number of landings authorized through SRPs in the Planning Area, with a modified ROP and current terms and conditions applied to SRPs. This alternative would establish a 77,797 acre ACEC with a special designation as a Resource Natural Area (RNA) within the northwest portion of the Planning Area. The ACEC would provide similar conservation benefits as the previous MCA as well as providing a control for future monitoring. No SRP landings would be permitted, and it would continue to provide for a study area.

Alternative F would allow for fewer landings then Alternative G annually in the Planning Area through the issuance of SRPs, which may limit operators from expanding their businesses, but could potentially reduce noise impacts to wildlife, other visitors, and local residents. The Planning Area would be designated an ERMA. The retention of the MCA for five years allows for the completion of current studies before the area is opened to SRP applicants. Impacts of this alternative would be mitigated through a modified ROP as well as current terms and conditions applied to SRPs.

Alternative G would allow for a significant increase in the number of landings authorized in the Planning Area through SRPs, which would benefit operators but could potentially increase noise impacts to wildlife, other visitors, and local residents. Although more frequent incremental increases were considered, in coordination with ADFG, it was determined that a 3-year period of time was the most appropriate based on mountain goat biology and logistical constraints associated with wildlife surveys. A 3-year period will allow adequate lag time to quantify impacts to mountain goat populations should they exist. Impacts of this alternative would be mitigated through a modified ROP, adaptive management, as well as current terms and conditions applied to SRPs. In this alternative the MCA would be lifted and a smaller area would be designated as an SRMA. The SRMA would be managed for wildlife dependent recreation activities and backcountry recreation opportunities.

Public Involvement

A Notice of Intent (NOI) to prepare the Draft RMP Amendment/Draft EIS was published in the Federal Register in March 2009. The NOI initiated a 90-day formal scoping period that lasted until June 26, 2009. Public meetings were held during the scoping period in the communities of Haines, Skagway, and Anchorage. In 2018, an additional 60-day public comment period that lasted until May 30, 2018 was offered and public meetings were held in the communities of Haines, Skagway, and Juneau.

In addition to both sets of public meetings, BLM consulted and solicited comments from local, state, and federal governments, special interest groups, and Native American tribes. The Municipalities of Haines and Skagway have entered into a formal cooperating agency status with the BLM regarding this planning effort. Concurrent with the beginning of the scoping period, the BLM developed a planning website for the Draft RMP Amendment/Draft EIS. All planning-related documents, including the Scoping Report are available for online viewing. Public involvement is described in more detail in Chapter 5 of the Supplemental Draft EIS.

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ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
ADFG	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AFO	Anchorage Field Office
ALTAA	Alaska Land Transfer Acceleration Act
AMG	Alaska Mountain Guides
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
AO	Authorized Officer
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
ERMA	Extensive Recreation Management Area
FAA	Federal Aviation Administration
FLPMA	Federal Land Policy and Management Act
GFO	Glennallen Field Office
GMU	Game Management Unit
GPS	Global Positioning System
IM	Instruction Memorandum
MCA	Monitoring and Control Area
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NPS	National Park Service
OHV	Off-highway vehicle
R&VS	Recreation and Visitor Services
RAC	Resource Advisory Council
RMA	Recreation Management Area
RMP	Resource Management Plan
RMZ	Recreation Management Zone
RNA	Research Natural Area
ROD	Record of Decision
ROP	Required Operating Procedure
ROS	Recreation Opportunity Spectrum
RSF	Resource Selection Function
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
TEMSCO	TEMSCO Helicopters, Inc.
UAS	Unmanned Aerial System
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRM	Visual Resource Management

1.0 INTRODUCTION

In 2012, the BLM prepared the Ring of Fire Draft Resource Management Plan (RMP) Amendment/Draft Environmental Impact Statement (EIS) to evaluate which, if any, designation and associated management practices and implementation actions best fulfill the resource needs and multiple-use demands within the Haines Planning Area (Planning Area) in Southeast Alaska. In 2012, the BLM put the plan amendment process on hold because the agency needed additional resource studies. In the fall of 2017, the Alaska Department of Fish and Game (ADF&G) presented their report entitled *Mountain Goat Resource Selection in the Haines–Skagway Area: Implications for Helicopter Skiing Management* (White & Gregovich, 2018) which has informed this process.

The Supplemental Draft EIS was prepared using the BLM's planning regulations and guidance issued under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), and under the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500-1508), BLM's NEPA Handbook 1790-1 (January 2008), and BLM's Land Use Planning Handbook 1601-1 (March 2005).

This Draft RMP Amendment/Supplemental Draft EIS evaluates whether to retain the Special Recreation Management Area (SRMA) designation in the Planning Area and whether any part of the Planning Area meets the criteria for an Area of Critical Environmental Concern (ACEC) designation.
The Supplemental Draft EIS also assesses two implementation actions: evaluating whether to retain the MCA for wildlife studies and evaluating a range of annual helicopter landings.

1.1 Planning Area Description

1.1.1 Geographic Description and Scope

The Planning Area encompasses approximately 950,000 acres in Southeast Alaska, bound by the Canadian border to the north and to the west, Glacier Bay National Park to the southwest, and the Tongass National Forest to the south and to the east (Map 1, see Chapter 7.0). A description of the BLM-managed lands is provided in Chapter 1.0, section 1.1.2.

This Planning Area consists primarily of steep and remote mountainous terrain, with bedrock and glaciers that restrict road or trail access. The primary mountain ranges consist of the Coast, Chilkat, Takhinsha, and Takshanuk mountains. Glaciers have scoured these mountains to form broad U-shaped valleys with steep sidewalls which ultimately terminate into the fjordland-rich waters of the Chilkat and Chilkoot inlets.

River bottoms are dominated by a complex array of coastal and interior transitional deciduous cottonwood forests and wetlands. Lower slopes are dominated by dense Sitka spruce, western hemlock and lodge pole pine forests that transition mid-slope to dense alder-dominated brush fields. Above the shrub zone, slopes are dominated by alpine tundra and herbaceous and grass-covered areas. Higher elevations include sparsely vegetated ridgelines, rock cliffs and spires, and glacier ice fields.

The communities of Haines and Skagway, Alaska (2010 population: 1,713 and 920, respectively) are located within the Planning Area.

1.1.2 Land Status

Of the total acreage within the Planning Area, the BLM currently manages approximately 326,397 acres (Table 1.1). All BLM-managed lands in the Planning Area are currently selected by the State of Alaska or Alaska Native corporations. BLM-managed lands in the Planning Area are located in two main blocks: the North Block is located northwest of Skagway along the U.S.-Canadian border and the South Block is located southwest of Haines along the boundary of Glacier Bay National Park.

The BLM Alaska Land Transfer Program is tasked with conveying Federal lands to the State of Alaska, Native Allottees, and Alaska Native corporations. This is done under the processes described in the Native Allotment Act of 1906, the Alaska Statehood Act of 1958, the Alaska Native Claims Settlement Act (ANCSA) of 1971, the Alaska Native Veteran Allotment Act of 1998, and the Alaska Lands Transfer Acceleration Act (ALTAA) of 2004. Until the selections are relinquished or conveyances are finalized, State- and Native-selected land will continue to be managed by the BLM.

Per Section 404 of the ALTAA, the State submitted selection priorities for the BLM-managed lands in the Planning Area by December 10, 2008. The State ranked selection priorities on a scale of one (highest) to 14 (lowest). The remaining State-selected lands in the Planning Area were categorized as priority 14 at that time. However, Section 404(b)(2) of ALTAA allowed the State to reprioritize any selection that remained on record (not conveyed) after September 30, 2009. Based on the State's current selection priority, the BLM believes that some of the lands closest to communities, roads, and infrastructure could be conveyed to the State of Alaska, and more remote parcels could remain under Federal management indefinitely.

As part of this planning effort, the BLM will only make decisions regarding lands and resources under its jurisdiction; however, these decisions will be made considering the varied jurisdictional interests in the Planning Area.

Table 1.1 Land Ownership/Management in the Haines Planning Area

Jurisdiction / Land Category	Acres	Percentage of the Planning Area
BLM-managed public lands (unencumbered)	15.8	< 0.01
State-selected	326,322	33.98
Native-selected	75	< 0.01
BLM-managed lands (subtotal)	326,397	33.99
National Park Service-managed lands	16,104	1.68
Military lands	645	<0.07
State of Alaska	595,081	61.97
Native Allotments	6,985	0.73
Native Patented	852	0.09
Private	4,153	1.47
TOTALS	951,018	100.0

1.1.3 Special Designations

Recreation Management Areas

Section VI of the Ring of Fire ROD and Approved RMP designated a Special Recreation Management Area (SRMA) in the North Block of the Planning Area. In August of 2014 BLM Manual H-8320- 1, Planning for Recreation and Visitor Services was updated. This Supplemental Draft EIS will reevaluate the 2008 designation.

At the time of the 2008 ROD, it was assumed that most, if not all, of the BLM-managed lands in the South Block would be conveyed to the State. Therefore, the SRMA boundary was not extended to the South Block at that time. Given the land status described in Chapter 1.0 section 1.1.2, this Supplemental Draft EIS will evaluate appropriate recreation management area designations for the South Block which is currently undesignated.

The boundary of the SRMA described in the 2008 ROD follows the boundary of BLM-managed lands in the North Block as of 2008. However, the boundary reflected in the Approved RMP is now inaccurate due to the conveyance of several sections of land to the State along the border of the SRMA. Therefore, the boundaries of the SRMA have changed and will be evaluated accordingly.

There currently is no Recreation Area Management Plan for the North Block SRMA. If the preferred alternative is selected, lands within the proposed SRMA boundary would be managed consistent with the goals of the SRMA. A SRMA Plan would be developed, subject to available staff and funding levels, once land ownership for the area is complete or once a large contiguous block of land is relinquished by the State of Alaska and becomes BLM unencumbered lands.

ACEC-RNA

In 2012, BLM determined that none of the ACEC nominations in the Planning area met the relevance and importance criteria, therefore, the 2012 Draft RMP Amendment/Draft EIS did not contain any proposed ACEC designations. During the Ring of Fire RMP Amendment Scoping period in 2018, the BLM received several external nominations for ACEC designations on BLM-managed lands within the Haines Planning Area (Map 1 in Section 7.0 shows BLM-managed lands in the Planning Area). Given the additional information gained since 2012, including the 2017 mountain goat study data, the BLM determined that a second look at ACEC nominations was in order.

BLM identified a portion of the MCA in the northwest part of the Planning area as an area meeting the requirements for an ACEC designation, to be managed as a Research Natural Area (RNA), a type of ACEC. BLM additionally identified Takshanuk Mountain and its surroundings as an area meeting the requirements for an ACEC designation due to cultural importance to Federally recognized tribes. Nominations and comments regarding ACECs are further described and analyzed in appendix C.

BLM designates ACECs as a way to highlight areas where special management attention is needed in order to protect and prevent irreparable damage to important historic, cultural and scenic values, fish or wildlife resources or other natural systems or processes; or to protect human life and safety from natural hazards (BLM, ACEC Manual 1613, 1988). To be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet the criteria of relevance and importance as established and defined in 43 CFR 1610.7-2.

An area meets the relevance criteria if it contains at least one of the following:

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).
2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).
3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geologic features).
4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

If the lands meet at least one of the relevance criteria, it must also meet at least one of the following importance criteria:

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resources.
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
5. Poses a significant threat to human life and safety or to property.

A Research Natural Area (RNA) is a type of ACEC. In order for any part of the Planning Area to be designated an RNA, it would first have to meet the relevance and importance criteria to be designated an ACEC.

In addition to meeting the relevance and importance criteria, to be designated as an ACEC, an area must require special management attention to protect important and relevant values. “Special management attention” refers to management prescriptions developed during preparation of an RMP or amendment expressly to protect the relevant and important values of an area from the potential effects of actions permitted by the RMP, including proposed actions deemed to be in conformance with the terms, conditions, and decisions of the RMP. These are management measures which would not be necessary and prescribed if the relevant and important features were not present.

Analysis

The following analysis was conducted in accordance with ACEC criteria found in 43 CFR 1610.7-2 and the BLM Manual for ACECs (BLM, 1988).

In order to determine whether to carry forward the designation of an ACEC as an alternative in this Supplemental Draft EIS, the BLM conducted an intensive internal review to determine whether any portion of the Planning Area qualifies as an ACEC. First, to ensure consistency in review and analysis, BLM specialists met to discuss and clarify the relevance and importance criteria noted above.

Each specialist conducted a review of his or her area of resource expertise to determine whether any portion of the Planning Area met the relevance and/or importance criteria. The following resources and/or values were evaluated against the ACEC criteria for relevance and importance:

- Cultural
- Fisheries
- Natural Hazards
- Scenic Values
- Vegetation
- Wildlife/Wildlife Habitat

Of the evaluated areas, only the Upper Chilkat River Traditional Use Area met the relevance and importance criteria for:

- Wildlife/wildlife habitat
- Takshanuk Mountains as culturally significant

Relevance Criteria
Of the four relevance criteria, numbers one and two are particularly relevant to the Wildlife and Cultural Resources discussion:

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).
2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

Wildlife Resources
The proposed area meets the relevance criteria as it contains mountain goat habitat essential to the maintenance of mountain goat diversity. Extensive research has been conducted on both mountain goat habitat requirements and genetic differentiation within the proposed ACEC area, thus highlighting the relevant value.

Cultural Resources
The proposed area meets the relevance criteria as the area contains a significant cultural resource in the form of mountain goats, which have provided wool to Chilkat Tlingit weavers for hundreds of years. The wool is used to create "Chilkat Blankets," which are an iconic Tlingit art form that is tied to their cultural, clan, moiety and village identities (Hotch, 2014). The blankets are used primarily during ceremonies and dances by high ranking members of the village (Emmons 1991:227).

Importance Criteria
Of the five importance criteria, numbers one and two are relevant to the Wildlife and Cultural Resources discussion:

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resources.
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Wildlife Resources
The proposed area meets the importance criteria because it provides habitat for mountain goat populations which may be fragile or sensitive to human activities, irreplaceable or unique and/or vulnerable to adverse change.

Among North American large mammal species, mountain goats are particularly sensitive to human disturbance (Côté, 1996) and exhibit heightened sensitivity to aerial disturbance such as helicopters and fixed-wing aircraft (Foster and Rahs, 1983; Côté, 1996; Goldstein et al., 2005; Cadsand, 2012; Côté et al., 2013; White and Gregovich, 2018). The proposed area has not previously permitted aviation activities; therefore, mountain goats and their habitat within the area have not been predisposed to impacts associated with such activities. For this reason, the proposed area is unique from that of the greater Planning Area where permitted helicopter and/or fixed-wing activities have and continue to occur. Research within the last decade has shown mountain goats in Haines/Skagway area to be genetically unique and harbor the descendants of a refugial population that survived the last glaciation in southeast Alaska (Shafer et al. 2011). Furthermore, genetic analyses reveal genetic subdivisions among the various geographic regions suggesting genetic diversity is high. The proposed area includes four different geographic regions with all three elevational mountain goat wintering strategies represented (i.e., low, medium, high). Additionally, cold adapted alpine species, such as mountain goat, are especially vulnerable to changing climates. Sustaining genetic diversity is vital for a species ability to cope with future environmental change.

Cultural Resources
The proposed area meets the importance criteria as it has more than locally significant qualities since "Chilkat Blankets" made from mountain goat wool have importance beyond the local Chilkat tribe. It is an art form that is ceremonially important throughout the Tlingit, Haida and Tsimshian peoples of Southeast Alaska, who all once made blankets of this type from mountain goat wool (Emmons 1991:224). But, it was only in this area that the blankets were made in later historic times and became synonymous with the Chilkat Tlingit.

Additionally, as an art form dependent on mountain goat wool, the complex weaving of "Chilkat Blankets" or "Naaxéin" has become rare among the Tlingit, with only a few traditional weavers still practicing the art (Hotch 2013). In the past, a skilled weaver could take up to six months to complete a single blanket and traditionally required three mountain goats to provide the wool (Emmons 1991:224-227). A recent resurgence in the weaving of the blankets in the village of Klukwan resulted in the creation of the "Klukwan Healing Robe," which took eight years and several weavers to complete (Hotch 2013). This blanket was based on the historic "Ravenstail Blanket," which originated from the Lynn Canal area, and was recreated as a project because of the desire of local weavers to restore the art of weaving "Chilkat Blankets."

1.1.4 Monitoring and Control Area
In 2002, a MCA was established in the northwest portion of the Planning Area. The boundaries were drawn based on where helicopter-supported recreation had not occurred nor been permitted, due to the flight times from Skagway. With its establishment, commercial helicopter landings were prohibited within the area boundary with the intention of providing a source of consistent monitoring data if and when adaptive management changes were necessary. The original MCA described in the ROD was 112,790 acres; however, after land conveyances to the State of Alaska, the MCA now consists of 98,004 acres (Map 4, see Chapter 7.0).

1.1.5 Permits and Operations

Helicopter landings are authorized by the BLM through SRPs. Prior to 2006, the number of annual landing authorizations and actual landings were much higher on BLM-managed lands. However, land conveyances to the State as well as changes in summer operations account for a significant decrease in annual landings on BLM-managed lands in recent years (see Chapter 3.0, section 3.2.4 for more information).

Two helicopter operators have been permitted on BLM-managed lands within the Planning Area in the North Block. In 2009, one operator was permitted for 4,700 summer landings annually on BLM-managed land, though from 2010-2014 they have only requested 1,900 summer landings annually. Another operator was permitted for 500 landings through 2011.

As of 2011, the two operators were authorized for up to 2,400 summer landings annually in the Haines Block SRMA (North Block only), excluding the MCA where no landings are permitted. (Chapter 3.0, section 3.2.4 further discusses types of authorized summer uses). However, at least two additional helicopter operators requested landing authorizations on BLM-managed lands in the Planning Area.

Winter landing authorizations were not issued from 2006 to 2013. In 2014, three permits for 100 landings each were issued on BLM-managed lands in the south block to begin in 2015. Three operators have continued to utilize these landings on an annual basis since 2015. These operators have also requested additional landings to enhance or grow their operations in the area.

Permitting helicopter and other organized flight excursions in the Planning Area is one of the primary administrative actions of BLM. This document will evaluate a range of annual helicopter landings as well as the impacts of permitted helicopter activities to the local communities, recreationists, and wildlife.

1.2 Purpose and Need

The purpose of this planning effort is to identify which, if any, designations, associated management practices, and implementation actions best fulfill the resource needs and multiple-use demands within the Haines Planning Area.

Action is needed to re-evaluate recreation and visitor services designations in the Planning Area to account for changes in BLM recreation policy. Action is also needed to comply with the direction in the Ring of Fire ROD, which deferred a final determination as to the establishment of an Area of Critical Environmental Concern (ACEC) for the Haines Block. In the fall of 2017, a multi-year BLM-funded study of goat and bear habitat was completed, prompting the need for a Supplemental Draft EIS.

Decisions to be Made

The land use planning-level decisions to be made through this plan amendment process include whether to:

- Retain the SRMA recreation management area designation in the North Block,
- Consider acreage reduction of the SRMA in North Block,
- Establish an ERMA designation in portions of lands in the North Block, and all of the South Block
- Establish ACECs in the Planning Area

The implementation-level decisions to be made through this process include whether to:

- Retain the MCA for wildlife studies.
- Establish a maximum number of authorized annual helicopter-supported recreation landings.

1.3 Issues Addressed

Based on the BLM's management concerns, and through scoping input received from Federal, state, and local agencies, and the public (refer to Chapter 5), the Supplement Draft EIS addresses the following issues:

- How would permitted helicopter-supported recreation activities impact mountain goats and their habitat?
- How would backcountry users be affected by possible increases of permitted helicopter-supported recreation operations and landings?
- How would air quality and climate change be affected by permitted helicopter-supported recreation operations?
- How would decisions affect recreational users reliant upon helicopter support and operations?
- How would special designations, such as an ACEC, SRMA, or MCA, affect overall land management in the area?
- How would increased helicopter-supported recreation landings or associated commercial operators affect jobs or household incomes within the Planning Area?
- How would the land use plan decision affect minority or low-income populations (such as Environmental Justice)?
- How would helicopter-supported recreation activities affect the availability of culturally important mountain goat wool for ceremonial dance blankets or "Chilkat Blankets" made by local Tlingit weavers?
- How would helicopter-supported recreation activities affect properties of religious and cultural significance identified by local tribes within the Planning Area?
- How would summer helicopter-supported recreation on glaciers or ice patches affect potential discovery of archaeological resources?

1.4 Issues and Resources Considered but Dismissed

The following issues were raised during scoping, but will not be further analyzed:

- *Effects of the proposed land use planning and implementation level decisions if the South Block lands were considered for designation as a SRMA* - Within a SRMA, recreation and visitor services management is recognized as the predominant land use plan focus. The South Block lands within the Planning Area are nearly inaccessible without aerial support. Other than aviation supported recreation, these lands see relatively little recreation use in comparison to other lands within or adjacent to the Planning area, such as the BLM North Block, Glacier Bay National Park, and Klondike Gold Rush National Historical Park. For these reasons, no alternatives considered a SRMA designation on the Haines Planning Area South Block lands.
- *Effects of proposed land use planning level decisions and implementation level decisions on subsistence uses in the Planning Area* - The Federal Subsistence Board implements a priority for subsistence uses by rural residents over other consumptive uses on unencumbered Federal public lands. With the exception of small isolated parcels, BLM-managed lands in the Planning Area are currently selected by the State of Alaska or Native Corporations. Under Alaska National Interest Lands Conservation Act (ANILCA) of 1980, State- and Native-selected lands are not within the jurisdiction of the Federal subsistence management program and are therefore, not subject to the Federal subsistence priority. None of the decisions made out of this planning effort would affect access to or use of subsistence resources in the Planning Area. Therefore, subsistence uses are not considered further in this SDEIS. (All of the wildlife species identified in Chapter 3.0, section 3.3 are subsistence resources. The effects to these species and/or populations are described in Chapter 3.0, section 3.4.)

- *Effects of the proposed land use planning and implementation level decisions on Soils, Water, and Vegetative resources within the Planning Area*– There will be no effects upon these resources by decisions contained within this SDEIS. Commercially authorized aviation activities discussed in this Plan land entirely upon snow covered ground.
- *Effects of the proposed land use planning decisions and implementation level decisions on Visual Resources*-The entire area is classified as Visual Resource Management (VRM) Class IV. Visual impacts created from helicopter-supported recreation activities are temporary in nature, limited to specific seasons of operation, and only evident in a specific time and place of short duration.
- *Effects of the proposed land use planning decisions and implementation level decisions on the Chilkoot National Historic Trail*- This NPS administered trail, near the community of Skagway, is near the flight path of some BLM permitted commercial aviation operators. Possible effects to users of the trail will be eliminated through adoption of a 1,500-meter buffer stipulation for BLM permitted activities pertaining to flight paths around the Chilkoot Trail.
- *Effects of the proposed land use planning decisions and implementation level decisions on Lands with Wilderness Characteristics*- Impacts from helicopter-supported recreation activities are temporary in nature, limited to specific seasons of operation, and only evident in a specific time and place of short duration. These activities have no effect on the landscape, result in no ground disturbing activities, and are neither pervasive nor omnipresent.
- *Effects of the proposed land use planning decisions and implementation level decisions on denning brown bears*- Wildlife specific management actions common to all alternatives, including Required Operating Procedures (ROPs) and permit stipulations, will provide conservation benefits for denning brown bears as much of their mapped denning habitat overlaps with high-use winter habitat of the plan's target species, mountain goats. (see Map 11, Chapter 7.0) For this reason, no further analysis will be provided.
- *Effects of the proposed land use planning decisions and implementation level decisions on BLM Special Status Species and migratory birds*- The Mexican distinct population segment of humpback whale (*Megaptera novaeangliae*) and western distinct population segment of Steller sea lion (*Eumetopias jubatus*) occur in coastal waters near the Planning Area. Informal consultations with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) occurred during the Ring of Fire RMP planning effort and again in July 2018. The decisions to be made by the BLM within this plan amendment will have no effect on these species, as all permitted activities resulting from this plan will take place in terrestrial environments, inland from Lynn Canal and/or coastal waters. Therefore, no further consultations were pursued for this RMP Amendment.

Management guidelines outlined by the USFWS (USFWS, 2007) specify that helicopters should maintain a minimum distance of 1,320 feet (1/4 mi) from all bald eagle nests between March 1 and May 31, and from all active nests (those containing eggs or young) between June 1 and August 31. With permit stipulations, including USFWS buffer requirements, no alternative within this plan amendment would adversely affect bald eagles.

The decisions to be made by the BLM within this plan amendment focus largely on helicopter-supported recreational activities such as winter heli-skiing and summer glacier landings. Heli-skiing occurs during winter months when migratory birds would not be present.

Glacier landings occur during late spring and summer when migratory birds may be present, however, landing sites are on broad, snow/ice covered glaciers which is not suitable nesting habit. Therefore, no further analysis will be provided.

The following resources were reviewed for consideration in the planning process, but will not be further analyzed because no resource-specific issues were identified and/or no effects are anticipated. No further issues or resource information, beyond that which was discussed in the Ring of Fire RMP were identified for this planning effort. The following resource descriptions and analysis from the Ring of Fire RMP, in order of appearance in the RMP, are hereby incorporated by reference and will not be further discussed in this SDEIS:

- Wildland Fire and Fuels
- Fisheries
- Forestry
- Grazing (Livestock and Reindeer)
- Hazardous Materials
- Iditarod National Historic Trail
- Paleontology
- Renewable Energy
- Soils
- Water Resources
- Floodplains
- Wetlands-Riparian
- Locatable or Leasable Minerals

Wild and Scenic Rivers

The BLM manages only small portions of the watersheds for all five of the eligible and tentatively classified waterways within the Planning Area. The majority of the waterways are lands that are State or Native Selected and long-term retention of the parcels in federal ownership is unknown. The BLM recognizes that deferral of the Wild and Scenic River suitability determination will require additional environmental consideration, as defined in 43 CFR 1610.5-5. This will include developing a separate NEPA document to evaluate the suitability of individual river segments for inclusion into the National Wild and Scenic River System. Protective management actions are subject to regulations and shall not allow activities or authorized uses to adversely affect the free-flowing characteristic of the river segment, the outstandingly remarkable values, or the tentative classification of the segment. The authorizing officer initiates protective management as soon as eligibility is determined. The five rivers identified in the Planning Area are:

- Tahini River
- Tsirku River
- Chilkat River
- Chilkoot River
- Chilkoot Lake Power site withdrawal

1.5 Planning Criteria

Planning criteria are the constraints or sideboards that guide the development of the Supplemental Draft EIS. These criteria help tailor the Supplemental Draft EIS to the pertinent issues, and ensure that the BLM avoids unnecessary data collection and analysis. Planning criteria are based on laws and regulations; guidance provided by the BLM Director and State Director; results of public participation; and coordination with cooperating agencies and other Federal agencies, State and local governments, and Tribal governments. Modifications to planning criteria may occur as the planning process progresses.

Planning criteria guiding this Supplemental Draft EIS include the following:

- The principles of multiple use and sustained yield, as defined by the Federal Land Management Policy Act (FLPMA), will be applied in the Planning Area.
- Decisions will be made for the surface lands administered by the BLM in the Planning Area.
- Decisions will be limited to recreation, wildlife, travel management, and special designations (i.e., ACEC, SRMA, ERMA, MCA).
- Valid existing rights will be protected throughout the Planning Area.
- Plans and policies of other federal land managers, land owners and state and local governments in and adjacent to the Planning Area will be considered. BLM's decisions will be consistent with other land managers' and owners' decisions to the degree reasonably practical within existing laws.
- The BLM will encourage and participate in collaborative planning and management. BLM will provide opportunity for input from other federal agencies, the State of Alaska, Native governments and Tribal members, local government, adjacent private landowners, local residents and other affected and/or interested parties.
- The BLM will comply with all relevant laws, statutes, regulations, manuals, and handbooks.
- Resource management plans prepared by BLM will conform to the Bureau's H-1601-1 Land Use Planning Handbook, Appendix C, Program-Specific and Resource-Specific Decision Guidance and supplemental program guidance manual for ACECs.
- The plan will be consistent with the Alaska Land Health Standards.
- Areas proposed for ACEC designation will meet the criteria found in 43 CFR 1610.7-2.

1.6 Relationship to BLM Policies, Plans, and Program Areas

This section is incorporated by reference, as there is no change in the analysis for this supplement; see the Ring of Fire Draft Resource Management Plan Amendment Haines Block Planning Area and Draft Environmental Impact Statement, 2012.

1.7 Related Plans

Lands not managed by the BLM adjacent to the Haines Planning Area are managed according to area- or jurisdiction- specific land and/or resource management plans. The BLM has considered the following plans in this planning effort:

- Haines Borough Comprehensive Plan (2004)
- Municipality of Skagway 2020 Comprehensive Plan (2009)
- State of Alaska Northern Southeast Area Plan (2002)
- Chilkat Bald Eagle Preserve Management Plan (2002)
- Haines State Forest Management Plan (2002)
- Tongass National Forest Land and Resource Management Plan (2008)
- General management plan development concept plan and environmental impact statement: Klondike Gold Rush National Historical Park: Skagway, Alaska and Seattle, Washington (1996)
- U.S. Forest Service Environmental Assessment Meade Glacier Heli-Tour Landings (2009)
- U.S. Forest Service Final Environmental Impact Statement for Commercially Guided Helicopter Skiing on the Kenai Peninsula (2004)
- State of Alaska Statewide Comprehensive Outdoor Recreation Plan (2004 - 2009).
- State of Alaska Haines State Forest Plan (2018)
- State of Alaska Division of Parks and Outdoor Recreation, Chilkat Bald Eagle Preserve (2018)
- State of Alaska Department of Transportation and Public Facilities Haines Highway From MP 3.5 to MP 25.3 Draft Revised Environmental Assessment and Section 4(f) Evaluation (2015)

- Chilkoot Indian Association Tribal Strategic Plan (2008 - 2018)
- Skagway Port Development Plan (2018)
- 2020 Skagway Comprehensive Plan (2009)

1.8 Summary of Consultation and Outreach Efforts

This section summarizes efforts to consult and coordinate with local, state, and federal government agencies, special interest groups, Native American tribes, and the public in the development of this SDEIS. Additional information regarding Consultation and Coordination efforts is described in Chapter 5.

In March 2009, the BLM Anchorage Field Office (AFO) began a scoping process for the RMP Amendment/DEIS. The formal scoping period ended June 26, 2009. Public meetings were held during the scoping period in the communities of Haines, Skagway, and Anchorage. In 2013, the effort was put on hold pending additional information. In 2014, the BLM Glennallen Field Office (GFO) was assigned the RMP Amendment effort. In 2018, the Glennallen Field Office started drafting the Supplemental EIS and reached out to the public again. The comments received during this public outreach are included in Appendix A.

On April 6, 2009, a letter requesting government-to-government consultation was sent to the Chilkat Indian Village Council. Follow-up phone calls were made to the Chilkat Indian Village Council prior to the scoping meetings held in Haines and Skagway. Additionally, the BLM offered to come to the community to conduct government-to-government consultation before or after the Haines public scoping meeting; however, the Chilkat Indian Village Council was unavailable for a meeting. In April 2018, the BLM conducted government-to-government consultation with the Chilkat Indian Village Council, the Chilkoot Indian Association, and the Skagway Traditional Council. Consultation with the Sealaska Corporation was included at the time as the affected regional ANCSA Corporation.

In 2009, the BLM invited Federal, State, local and Tribal entities with jurisdiction by law and/or special expertise to become cooperating agencies for the Ring of Fire RMP Haines Amendment. The Municipality of Skagway entered into formal cooperating agency status with the BLM. The State of Alaska responded that the current strategy for cooperation and consultation on land use planning efforts was working well and that it would like to participate in that manner. As part of the strategy, the State of Alaska and the BLM jointly funded a liaison position. The NPS submitted scoping comments but declined formal cooperating agency status. In 2018, in preparation of the Supplemental Draft EIS, the BLM again inquired of the Federal, State, local and Tribal entities of their interest in cooperating. The Haines and Skagway boroughs entered into formal cooperating agency status with the BLM.

In April 2018, a public comment period was offered in preparation for a Supplement to the 2012 Draft. The BLM once again asked the local, State, and Federal government agencies, special interest groups, Native American tribes, and the public for input to address any new concerns regarding this planning effort. Comments were received relating to wildlife habitat, mountain goats, consideration of designating an ACEC for mountain goats, and places of traditional cultural importance. Additionally, comments were received requesting an increase in the number of permitted landings on BLM-managed lands and to allow for landings in the North Block.

Additional public involvement opportunities will occur following publication of the Notice of Availability of this Supplemental Draft EIS in the *Federal Register*. The BLM will provide for a minimum of 90-days for public review. The BLM will continue to meet with cooperating agencies and will consult with Tribal entities that have expressed a cultural or traditional interest in BLM-managed lands within the Planning Area. The public and interested parties are encouraged to continue to participate in this planning effort.

2.0 ALTERNATIVES

2.1 Introduction

This chapter outlines alternatives considered to manage BLM-managed lands and resources in the Planning Area. Each alternative represents a complete and reasonable set of objectives, actions, and allocations that would guide future management of BLM-managed public lands and resources in the Planning Area.

Alternatives are limited to the scope of the analysis as well as the purpose and need of this amendment, as described in Chapter 1, and will not affect the management decisions outside the scope of this amendment, as set forth in the Ring of Fire RMP ROD (2008). This Supplemental Draft EIS contains information that has facilitated the development of three supplemental alternatives.

While working with the cooperating agencies it was determined that a common means of measuring use was needed. Therefore, during the development of alternatives, it was agreed to that a conversion from user days as permitted by the Haines Borough and the landings as permitted by the BLM was needed for consistency. The BLM developed this conversion which assumes one individual skiing a full day comprises approximately six runs, which would equate to 12-landings (one pick-up and one drop-off for each run per day). For the purpose of this analysis a helicopter landing is defined as a touch down by the helicopter and/or each hovering event that allows for the exit or entrance of passengers. A ship can hold a maximum of six skiers per trip. In order to convert from permitted user days to permitted landings this document utilizes a formula which divides the total number of landings per day (12) by the number of maximum passengers per ship (6), or a 2:1 ratio between landings and user days. Therefore, as currently permitted by the Haines Borough (2,600 user days) would equate to 5,200 landings.

The three supplemental alternatives (Alternatives E, F, and G) using the conversion formula are analyzed in this Supplemental Draft EIS and are replacements of the three action alternatives (Alternatives B, C, and D) found within the Draft EIS. As required by NEPA this document also presents a No Action Alternative, Alternative A. Alternatives were developed using an interdisciplinary team process that included BLM staff specialists and cooperating agencies, as well as input from public outreach, which included an additional 60-day public comment period in 2018. Implementation of future management actions under any alternative will be subject to available staff and funding levels. The supplemental alternatives provide a full range of choices for meeting the BLM's planning and program management requirements as well as resolving the planning issues identified (see Chapter 1.0, section 1.3). At the end of this chapter, Tables 2.3 and 2.4 provide a summary of management actions across each supplemental alternative as well as a comparison of the anticipated impacts by alternative.

2.2 Management Common to All Supplemental Alternatives

The following management actions, measures, and strategies are common to all supplemental alternatives.

2.2.1 Required Operating Procedures

The ROD contains Required Operating Procedures (ROPs) that apply to all permitted activities, including FLPMA leases and permits, SRPs, etc. (BLM 2008). "These ROPs were developed to ensure that the objectives identified in the Alaska Land Health Standards continue to be met when carrying out permitted activities and management practices," (BLM, 2008). Unless otherwise noted, the ROPs established in the Ring of Fire RMP ROD are common to all alternatives and remain in effect for the purposes of this planning effort (refer to Appendix D of the Ring of Fire ROD for a list of ROPs).

Since the 2008 ROD, and the subsequent Draft EIS, the BLM modified ROP #16 as a result of additional ADFG mountain goat collar data. This data has contributed considerably to the BLM's understanding of goat habitat use patterns in the Planning Area. This ROP has been refined by the BLM, taking into account the new data and studies conducted since 2012. (Table 2.1):

Table 2.1 Comparison of ROP #16.

ROP #16, Original Language (2008 ROD)	ROP #16, (Draft) Modified Language (2012 Draft)	ROP #16 New Supplemental Language (2018 Supplement)
In critical Dall sheep and mountain goat habitat (Figures D-12 and D-13), helicopters used in support of permitted activities will maintain one- half mile of horizontal and 1,500 ft vertical distance from goats and sheep. Heli-ski landing or skiing is not permitted in Dall sheep or goat critical ranges, as identified based on Alaska Department of Fish & Game (ADFG) maps and refined by monitoring. (BLM 2008)	In Dall sheep and mountain goat habitat, aircraft used in support of permitted activities will not land within a ½ mile of known kidding areas* between May 1 and June 15. Dall sheep and mountain goat high use areas and important winter habitat are shown on Map 6 DEIS, see Chapter 7.0. Aircraft will maintain 1,500 feet vertical and horizontal distance from visible goats and sheep, as well as habitats that are mapped as high use areas. Aircraft will not land within ½ mile of habitats that are mapped as high use areas. In winter, recreation activities are not permitted in mapped high use areas. As new data becomes available, Map 6 DEIS any nearby authorized activities will be reviewed accordingly. (BLM 2012)	Helicopters used in support of permitted recreation activities will maintain 500-meter vertical and 1500-meter horizontal distance from visible Dall Sheep and mountain goats[1]. Helicopters used in support of permitted recreation activities will not land within 1500-meters of known mountain goat kidding areas* or Dall sheep lambing areas* between May 1 and June 15. Helicopters used in support of permitted recreation activities will not land within high-use winter habitat between December 1 and April 15 and will maintain a 500-meter aboveground level (AGL) altitude above habitats mapped as high-use. Dall sheep and mountain goat high-use habitats are shown on Map 10, see Section 7.0.

* Data collection on Dall sheep lambing and mountain goat kidding high-use areas is ongoing. SRP requests will be reviewed on a case-by-case basis to identify flight avoidance areas.

[1] In the event a 1500-meter horizontal separation cannot be met (i.e., narrow valley), a 500-meter minimum vertical separation distance from animal must be maintained.

For the purposes of this supplemental analysis, Alternatives E, F, and G, are based on ROP #16 2018 Supplemental. (Additionally, the most current ROP is included in all current SRP stipulations for authorized aviation operations occurring on BLM-managed lands within the Planning Area.)

2.2.2 Current Permit Stipulations

This analysis assumes the continuation of current SRP stipulations, or terms and conditions, for all authorized helicopter-supported recreation activities on BLM-managed lands within the Planning Area. The following SRP special stipulations and general terms are applicable to alternatives E, F, and G:

1. In mountain goat habitat, aircraft used in support of permitted activities will not land within 1500-meters of known kidding areas between May 1 and June 15. Mountain goat high-use area habitats are shown on Map 10 (see Chapter 7.0). Aircraft will maintain 500-meters vertical and 1500-meters horizontal distance from visible mountain goats and Dall sheep. Aircraft will not land within mapped high-use winter habitat, Map 10 (see Chapter 7.0). As new data becomes available any authorized activities in the area will be reviewed accordingly.

2. All operations will maintain a 500-meter separation distance from wildlife including: mountain goat, brown and black bears, wolves, wolverine, moose, sea lions, and other marine mammals. Steepness (degree in slope) and roughness (outcrops and spur ridges) affect the ratio of elevation to horizontal distance significantly. Attempts should be made to maximize distance between ground and habitats or animals wherever possible. Flight routes over near level terrain will maintain a minimum of 500-meters above ground level (AGL) and 500-meters horizontal distance from wildlife habitat features described above. Pilots are not expected to compromise safety when weather conditions indicate the 500-meter minimums separation distance cannot be met.

3. All authorized operations will adhere to U.S. Fish and Wildlife Service (USFWS) National Bald Eagle Management Guidelines to include:
   a. Avoid operating aircraft within 1,000 feet of any eagle nest during the breeding season.
   b. Locate aircraft corridors no closer than 1,000-feet vertical or horizontal distance from communal roost sites.

4. Helicopter use on the Nourse Glacier is restricted from May 1 through June 15 as follows:
   a. Approaches and departures will be from the south to reduce potential impact to goats on kidding habitats north of the site.
   b. Flight corridors to the north and northwest of the Nourse Glacier will not be used for flight seeing or access to the Chilkat Ice Fields Between May 1 and June 15.
   c. Access to the Chilkat Ice Fields will be through either the West Creek or Grand Canyon corridors. These restrictions are intended to reduce potential impacts to wildlife, in general, as well as goat use patterns when dispersing to and/or occupying kidding habitat or high quality forage sites. Other seasonal timing limitations may be applied to other important habitat areas as determined by current mountain goat collaring studies.

5. Authorized operations shall not hover, circle, or harass wildlife in any way. This refers particularly to mountain goats, wolves, bears, eagles, sea lions, and other marine mammals, but includes all wildlife species. All flights shall operate within designated flight corridors and elevation restrictions.

6. All authorized operators will assure that their operations meet Federal Aviation Administration (FAA) requirements to achieve safe air operations (routing, airspace separation and coordination with other operators).

7. All authorized operators will be required to submit and abide by a Safety and Operating Plan, which will be approved by the BLM and will be a part of the Special Recreation Permit. The FAA may review these submissions.

8. The Authorized Officer (AO) may suspend or modify an SRP, including adaptive management strategies, if necessary to protect public resources, health, safety, or the environment or as a result of non-compliance with permit stipulations.

9. There will be no disturbance of any archaeological or historical sites, including archaeological resources melting from glaciers or ice patches as well as cabins or other structures. There will be no collection of artifacts. The collection of vertebrate fossils, including mammoth and mastodon bones, tusks, etc, is prohibited. If cultural or paleontological resources are encountered during permitted activities, these items will be respectfully left in their location and the BLM GFO Authorized Officer shall be notified.

10. Best Management Practices will be provided at the time of permitting.

2.2.3 Adaptive Management Strategy

Adaptive management is a decision process that promotes flexible resource management decision-making based on clearly identified outcomes (goals) that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust resource management directions as part of an iterative management process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a "trial and error" process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits.

The following adaptive management strategies apply to Alternatives E, F, and G as listed below. The goals of the BLM's Adaptive Management Strategy in the Planning Area include:

1. Maintain natural ecosystem functions with the quality and quantity of habitat necessary to support healthy populations of mountain goats and other wildlife.
2. Monitor wildlife populations and habitat while managing BLM-managed lands to conserve and enhance populations of mountain goats and other wildlife.
3. Protect habitats important to mountain goats and other wildlife populations by the avoidance, minimization, or mitigation of possible adverse effects of permitted land use activities.
4. Balance visitor experience with protection of the resources in the area.

Successful adaptive management couples a change in management direction after a change in resources condition has been realized. The following steps are necessary to manage wildlife resources within the Planning Area when incorporating adaptive management:

- ensure continued population and habitat data collection,
- identify monitoring indicators,
- establish soft and hard triggers or thresholds,
- identify implementable management actions and continue to monitor and evaluate for effectiveness. Continued cooperation and collaboration with ADFG and the establishment of this adaptive management framework is paramount to the success of this strategy.

In advance of this collaborative effort, the following management indicators are suggested:

- population estimates
- population trends
- adult:kid ratios

The following are suggested management responses:

- re-distribute permitted use (fly/no-fly zones) (avoidance)
- establish timing (season, duration, frequency) restrictions (minimization)
- reduce permitted landing allocations (mitigation)

2.3 Supplemental Alternatives

Alternative E

This alternative highlights management that would facilitate current resource settings while maintaining permitted commercial aviation activities at current levels. It would not provide for future growth of permitted aviation-based recreation activities. It is comprised of the following elements:

Special Designations, ACEC-RNA (approximately 78,000 acres)

- The proposed ACEC is located in the Upper Chilkat River drainage and includes geographic features such as Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, Mount Raymond and portions of the upper Chilkoot River to the east (See Appendix C for the Haines Block ACEC Nomination).
- The proposed area meets the ACEC relevance criteria for wildlife as it contains mountain goat habitat essential to the maintenance of mountain goat diversity. It also meets the relevance criteria for significant cultural resources in mountain goats, since their wool is culturally significant to the Tlingit peoples of Southeast Alaska.
- The area also meets the ACEC importance criteria for wildlife because it provides habitat for mountain goat populations, which may be fragile or sensitive to human activities, irreplaceable or unique and/or vulnerable to adverse change. It meets the importance criteria for significant cultural resources because it has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, and cause for concern; “Chilkat Blankets” made from mountain goat wool have importance beyond the local Chilkat tribe. Chilkat Blankets are an art form that is ceremonially important throughout the Tlingit, Haida and Tsimshian peoples of Southeast Alaska, who all once made blankets of this type from mountain goat wool.
- No SRP helicopter-supported recreation landings or UAS use would be allowed within the ACEC-RNA.
- Placement or construction of structures would not be allowed within the boundaries of the ACEC-RNA.
- The entire ACEC-RNA would be a Right-of-Way (ROW) avoidance area. Portions of the ACEC-RNA on Takshanuk Ridge would be a ROW exclusion area and no surface disturbing activities would occur on these lands.

MCA

- Lift the approximately 98,004-acre MCA.

Recreation Management Area Designation

- The North and South Blocks (excluding the ACEC-RNA) would be managed as an ERMA. The ERMA would consist of 239,299 acres. ERMAs are administrative units that require specific management consideration in order to address recreation use, demand, or Recreation and Visitor Services (R&VS) program investments. The management focus of ERMAs is to support and sustain the principal recreation activities and the associated qualities and conditions of the ERMA, commensurate with management of other resources and resource uses.
- In the ERMA, under Alternative E the R&VS focus would be on maintaining current resource settings and current helicopter supported recreation landings (2,700 landings).
- The ERMA designation will not apply to lands within the ACEC-RNA.

Number of Authorized helicopter-based Recreation Landings – Summer and Winter

Summer 2,400 helicopter supported recreation landings

- Winter 300 helicopter landings, outside of high use winter mountain goat habitat.

Alternative F
This alternative is similar to Alternative D, as previously analyzed in the 2012 DEIS. The main difference being that it incorporates the ROP #16 2018 supplemental language.

This alternative provides a balance of resource protection and recreation resource opportunity development and includes the following elements:

Recreation Management Area Designation

- Change the current SRMA designation for the North Block area to an ERMA. Apply the ERMA designation to BLM-managed lands in the South Block. The ERMA would be comprised of 317,919 acres, or all of the BLM-managed lands within the Haines Planning Area. ERMAs are defined as administrative units that require specific management consideration in order to address recreation use, demand, or R&VS program investments. The management focus of ERMAs is to support and sustain the principal recreation activities and the associated qualities and conditions of the ERMA, commensurate with management of other resources and resource uses (also see Table 9, Chapter 3.0 section 3.2.5 Draft EIS 2012). This change in designation would be based on recent BLM policy changes regarding the focus and use of SRMAs. The BLM now develops each new SRMA based on where the existing or proposed recreation opportunities and recreation setting characteristics are recognized for their unique value, importance, and/or distinctiveness, especially as compared to other areas used for recreation. These areas may require a higher level of investment and/or management to protect and enhance a targeted set of activities, experiences, benefits, and desired recreation-setting characteristics. Increased investment or management may include development and maintenance of recreation amenities to administer or enhance the physical, social, and operational recreation setting characteristics. The Planning Area does not contain recreation amenities, and the lands currently have a low concentration of recreation use as compared to other areas in the region, which suggests that an ERMA would be appropriate.
- In the ERMA, under Alternative F, the R&VS focus would be on maintaining current resource settings while allowing for consideration of increased helicopter supported recreation landings and an increased area of operations.

Monitoring and Control Area

- Under this Alternative, the 98,004-acre MCA would be retained for a period of five-years from the signing of the ROD for the Supplemental EIS to provide a control area for mountain goat studies conducted jointly between the BLM and ADFG. After the five-year period expires, the MCA would be lifted. Permit applications would be considered for review through site-specific NEPA prior to any new authorizations. Future landing authorizations would be contingent on the results of the study efforts and established limits for this alternative.

Number of Authorized Helicopter Landings – Summer and Winter

- Increase the total permitted landings in the Planning Area to a maximum of 6,000 landings, 3,000 winter and 3,000 summer, annually in both the North and South Blocks. Winter landings must occur outside of high use winter mountain goat habitat (See ROP #16). But may occur within buffered high-use winter mountain goat habitat.
- Permitting 6,000 landings annually would allow operators to expand operations, while also leaving capacity for additional operators to conduct permitted helicopter landings, including commercial filming, in the Planning Area.
- The 6,000 maximum permitted landings must occur outside of the MCA for the first five years.

Alternative G
This alternative provides a balance of resource protection and recreation development and growth. It includes the following elements:

Special Designations, Chilkat Mountains Special Recreation Management Area (approximately 65,467 Acres)

- This designation would include portions of BLM-managed lands in the North Block along the Takshanuk Mountains and Upper Chilkat River drainage.
- Maintain current unfragmented habitat which provides for a sustainable and harvestable mountain goat population. Provide a contiguous, undisturbed land base for sport hunting, wildlife viewing, and backcountry activities.
- In cooperation with the ADFG manage for healthy and vibrant populations of mountain goats while sustaining a traditionally significant resource.
- Helicopter landings and UAS through special recreation permit are not permitted. Fourteen consecutive day camping limit on SRMA lands year round. The area is classified as limited to existing routes. Additional routes could be designated. Permitted surface occupancy in high use goat habitat would be avoided. The SRMA is classified as VRM Class IV and managed under VRM Class IV objectives. The use of helicopters in support of mining activities is permitted through the Ring of Fire RMP and BLM regulations and is not subject to limitations identified within this SRMA.
- All of the lands within the 65,467 acres are within federal management. Future lands acquired, through relinquishment of state selected lands or other means, that are attached to the road systems within the Planning Area or bordering the SRMA would be included within the SRMA. Future lands acquired not meeting these two parameters would become part of the ERMA lands.
- Maintain current level of hunting opportunity within the SRMA. Work collaboratively with ADFG to monitor goat populations on an annual basis. Utilize information gained within the SRMA to inform permitted landings for helicopter supported recreation activities on adjacent lands. High use goat habitat, to include kidding areas, will be monitored in partnership with ADFG.
- Use of Off Road Vehicles is limited to existing or designated routes, over snow travel is permitted with sufficient snow cover or ground frost.
- Fixed wing access and special recreation permits related to fixed wing access are allowed.
- Future consideration of backcountry cabins within the SRMA is allowed.

Recreation Management Area Designation

- The North and South Blocks (excluding the Chilkat Mountains SRMA) would be managed as an ERMA. The ERMA would consist of 252,343 acres. ERMAs are administrative units that require specific management consideration in order to address recreation use, demand, or R&VS program investments. The management focus of ERMAs is to support and sustain the principal recreation activities and the associated qualities and conditions of the ERMA, commensurate with management of other resources and resource uses.
- In the ERMA, under Alternative G, the R&VS focus would be on maintaining current resource settings while allowing for consideration of increased helicopter supported recreation landings under an adaptive management framework.
- The ERMA designation will not apply to lands within the SRMA.

Number of Authorized Helicopter-Supported Recreation Landings – Summer and Winter

- The total number of permitted landings would increase in the Planning Area to a maximum of 11,000 landings annually within both the North and South blocks, or a maximum of 5,500 summer and 5,500 winter landings. During the first year, a maximum of 1,600 winter permits would be allocated within buffered high-use winter mountain goat habitat. Map 12 in Chapter 7 illustrates the 1,500 meter buffered, high-use winter mountain goat habitat. Winter landings outside of high use mountain goat habitat would not count toward the total number of permit allocations, up to 5,500 maximum landings annually. Permit utilization by all operators, combined use of 75 percent over three years, may trigger a permitting step increase within buffered high use mountain goat winter habitat, if goat monitoring indicates goat populations are healthy (see Table 2.2).
  Additionally, 5,500 summer landings would be permitted annually. A maximum of 1600 summer landings would be allocated in the first year. Permit utilization by all operators, combined use of 75 percent over three years, may trigger a permitting step increase in summer allocations. The BLM in cooperation with the Alaska Department of Fish and Game (ADFG) would consider incremental increases to permit allocations if operator(s) are in good standing and there are no concerns with mountain goat populations or trends. The possible incremental increases are depicted in the table 2.2.
- The BLM is in cooperation with ADFG to describe thresholds for things such as mountain goat health, population estimates, population trends, or kidding rates of concern, the authorized officer, at their discretion, may modify permitted helicopter-supported recreation activities when a threshold is reached. Modifications could include, but are not limited to re-distribute permitted use (fly/no-fly zones), establish timing (season or duration) restrictions, and reduce permitted landing allocations.
- Helicopter-supported recreation landings occurring outside of the 1,500 meter buffered high use winter mountain goat habitat would not count against landing permit allocations up to 5,500 total landings annually.

Table 2.2 Alternative G Incremental Increase in Landings

Total Permitted Landings per Season outside high use habitat (Winter or Summer)	Total Permitted Winter Landings within high use habitat	Total Permitted Summer Landings within high use habitat	Potential Increase[a]
5500	1600	1600	Year 1
5500	3200	3200	Year 3
5500	4800	4800	Year 6
5500	5500	5500	Year 9

a. Step increases based on permit utilization of 75% over three years, if the results of continued mountain goat monitoring indicate populations are healthy.

Table 2.3 Summary Comparison of the proposed Management Actions by Supplemental Alternative.

Management Actions	Alternative A (No Action)	ALTERNATIVE E	ALTERNATIVE F	ALTERNATIVE G (Preferred)
Designations & Acreages:	• **SRMA:** North Block (250,459 acres) • **SRMA MCA:** Western Portion within the North Block (98,004 acres) • **Lands Not Designated as Recreation Management Areas:** South Block (66,637 acres)	• **ERMA:** Eastern portion of North Block and the South Block (239,299 Acres). ERMA designation will not apply to the ACEC-RNA. • **ACEC-RNA**: Western portion of the North Block (77,797 acres)	• **ERMA:** Entire North and South Blocks (317,096 acres) • **MCA for 5 years:** Western portion within the North Block (98,004 acres)	• **ERMA:** Eastern portion of North Block and entire South Block (approximately 251,629 acres). • **SRMA:** Western portion of North Block (approximately 65,467 acres)
Objectives:	• **SRMA Objective:** o Provide for diversity of recreation opportunities and quality commercial recreation use experience o Manage for undeveloped recreation tourism o Avoid adverse effects to wildlife o Minimize disturbance to adjacent communities • **SRMA MCA Objective:** o Provide an unimpacted, unfragmented area consistent for monitoring and control research and data analysis. o Utilize analyses in comparison to impacted area analyses to inform future management decisions within the Haines Planning Area. • **No ACEC Designation** • **Lands Not Designated as Recreation Management Areas:** o No recreation management emphasis would be extended for these lands. o Lands would be managed under ROF ROD, FLPMA, BLM Regulations and Policies, and applicable ROPs, Stipulations, and Adaptive Management.	• **ERMA Objective:** o Provide for dispersed recreation opportunities commensurate with resource management and uses. o Provide for commercial recreation opportunities consisting primarily of aviation related special recreation permits while sustaining the health and diversity of wildlife populations. • **No MCA** (MCA objectives as described in Alternative A would be managed under an ACEC-RNA) • **ACEC Relevance and Importance Values:** o **Relevance:** ▪ Goat habitat that is essential for maintaining mountain goat diversity ▪ Significant cultural resources important to maintaining Chilkat goat wool weaver traditions. o **Importance**: ▪ Fragile, irreplaceable, unique, unimpacted mountain goat populations/habitat. ▪ Continuation of distinctive Chilkat Traditional goat wool blanket weaving practices. • **ACEC Objective:** o Serve as a wildlife refugia and provide for monitor and control of Haines Planning Area mountain goat and other wildlife populations. Area includes 4 of the 9 Haines area mountain goat populations and all 3 mountain goat wintering strategies. o Manage for sensitive properties of traditional, religious and/or cultural importance. Maintain access to goats for cultural uses. Protect sensitive cultural resources along the Takshanuk Ridge and the Chilkat River.	• **ERMA Objective**: o Same as Alternative E • **MCA Objective:** o Same as Alternative A o Retain MCA for 5 years, then lift • **No ACEC Designation**	• **ERMA Objective:** o Same as Alternative E • **SRMA Objective:** o Provide for primitive hunting and recreation opportunities, such as skiing and snowboarding, snowshoeing, hiking, camping, backpacking, hunting, wildlife viewing, and photography. • **No MCA (**MCA objectives as described in Alternative A could be met within SRMA Objectives). • **No ACEC Designation**

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Table 2.3 Summary Comparison of the proposed Management Actions by Supplemental Alternative – continued.

Management Actions	Alternative A (No Action)	ALTERNATIVE E	ALTERNATIVE F	ALTERNATIVE G (Preferred)
Permitted uses and access	• **Within SRMA:** o Limit to 2015-2019 permit levels: 2,700 maximum total landings. o Aircraft will not land within 0.5 mile of habitats mapped as high-use areas. o Helicopter use on and near the Nourse Glacier is restricted from May 1 to June 15. o Flight corridors will be designated for helicopter permitted landings. o Winter SRP activities are closed in areas mapped as high-use mountain goat habitat (see ROP 16). o Skiers will not use routes within 0.5 mile of known winter high use habitats. o **Winter**: 300 landings in the South Block through annual year permits using adaptive management. o **Summer**: 2,400 landings in the North Block • **Within SRMA MCA:** o Closed to helicopter-supported permitted landings or UAS use. o Closed to fixed wing access. • **Within Lands Not Designated as Recreation Management Area:** o Aircraft will not land within 0.5 mile of habitats mapped as high-use areas. o Winter SRP activities are closed in areas mapped as high-use mountain goat habitat. o Aircraft will not land within 0.5 mile of known kidding areas May 1 to June 15.	• **Within ERMA:** o Limit to 2015-2019 permit levels: 2,700 maximum total landings. o Fixed wing SRP landings would be permitted. o Fixed wing causal use landings allowed. o No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). o **Winter**: 300 combined total permits (South Block ERMA only) o **Summer**: 2,400 combined total permits (North Block ERMA only). • **Within ACEC-RNA:** o Closed to helicopter-supported permitted landings or UAS use. o Closed to fixed wing access. o Closed to other motorized or mechanized use.	• **Within ERMA:** o Expand current permit levels: 6,000 maximum total landings (outside of the MCA for the first 5 years, includes MCA after 5 years) o Fixed wing SRP landings would be permitted. o Fixed wing causal use landings allowed. o No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). o **Winter**: Permit up to 3,000 landings. o **Summer**: Permit up to 3,000 landings. • **Within MCA:** o Closed to helicopter-supported recreation permits, landings or UAS use within MCA for first 5 years. o Closed to fixed wing SRP access for 5 years. o Fixed wing causal use access allowed.	• **Within ERMA:** o Expand current permit levels: 11,000 maximum total landings through adaptive management process. o Fixed wing SRP landings would be permitted. o Fixed wing casual use landings allowed. o No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). o Permit utilization of 75 percent over three-years, triggers permitting allocation increase, if monitoring indicates healthy goat populations and desired trends (see Table 2.2). o If goat health concerns are documented in coordination with ADFG, permittees may be restricted by area, frequency, and duration. Reduction in landings to previous permitted allocations would be considered last. • **Winter**: Permit up to 5,500 landings. *Year 1:* o Outside buffered habitat 5,500 landings. o Within buffered habitat allocate a maximum of 1600 winter landings. • **Summer**: Permit up to 5,500 landings. *Year 1:* o 1600 summer landings. • **Within SRMA**: o No helicopter-supported recreation landings or UAS use allowed. o Fixed wing casual use access allowed. o Fixed wing SRPs to include transporters consistent with SRMA objectives would be considered. o Non-motorized SRPs considered.

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Table 2.3 Summary Comparison of the proposed Management Actions by Supplemental Alternative.- continued

Management Actions	Alternative A (No Action)	ALTERNATIVE E	ALTERNATIVE F	ALTERNATIVE G (Preferred)
Other Decisions:	• **OHV:** o **Within SRMA, SRMA MCA, and Lands not Designated for RMA:** Limited to Existing Roads and trails to be consistent with State of Alaska's Generally Allowed Uses. • **VRM:** IV • **Minerals:** o No designations made in this RMP. • **Land Use within SRMA:** o ROW consistent with SRMA objectives considered. o Land acquisitions within SRMA considered. • **Land Use within SRMA MCA:** o ROW avoidance area. o Surface use or occupancy would be avoided in high use winter mountain goat habitat. o Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use within Lands Not Designated for RMA:** o All land uses permitted in ROF ROD Land Use. Management Decisions and ROPs, Stipulations, and Terms would be considered. • **Administration:** o Use of aviation and motorized and mechanized vehicles would be permitted for administrative or safety purposes on all lands (examples: permitted research activities, rescue operations, other administrative purposes).	• **OHV**: o **Within ACEC-RNA:** Recreational use limited to existing riverine routes, no additional routes considered. o **Within ERMA:** Limited to existing roads and trails to be consistent with State of Alaska's Generally Allowed Uses. • **VRM:** IV • **Minerals:** o No designations made in this RMP. • **Land Use within ACEC RNA:** o ROW exclusion area. o No surface use, occupancy, nor surface-disturbing activities permitted on Takshanuk Ridge (22,910 acres) or Klukwah Mountain (23,346 acres) for the protection of cultural and wildlife values. o Closed to surface use or occupancy in high use winter mountain goat habitat o Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use within ERMA:** o ROWs considered o Land uses permitted under the ROF plan, such as mining access, would continue. • **Administration:** o Same as Alternative A	• **OHV:** o **Within MCA for 5 years**: Recreational use limited to existing riverine routes. o **Within ERMA**: Same as Alternative E • **VRM:** IV • **Minerals:** o No designations made in this RMP. • **Land Use within MCA (for 5 years):** o ROW avoidance area. o Surface use or occupancy would be avoided in high use winter mountain goat habitat o Land uses permitted under the ROF plan, such as mining access, would continue. o **Land Use Within ERMA** Same as Alternative E • **Administration:** o Same as Alternative A	• **OHV:** o **Within SRMA:** Recreational use limited to existing routes. Additional routes could be designated. o **Within ERMA:** Same as Alternative E. • **VRM**: IV • **Minerals:** o No designations made in this RMP. • **Land Use Within the SRMA:** o ROW consistent with SRMA objectives considered. o Surface use or occupancy would be avoided in high use winter mountain goat habitat o Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use Within the ERMA:** o Same as Alternative E • **Administration:** o Same as Alternative A

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Table 2.4 Summary Comparison of Supplemental Alternative Impacts.

Management Action	Alternative A	Alternative E	Alternative F	Alternative G
Recreation Management Area Designation	**SRMA:** North Block (251,285 acres) **SRMA MCA:** Western Portion within the North Block (98,004 acres) Lands Not Designated as Recreation Management Areas: South Block (66,637 acres)	The North and South blocks (239,299 acres) would be managed as Extensive Recreation Management Areas (ERMA) The ERMA designation will not apply to lands within the ACEC-RNA in the North block. **ERMA Objective**: Provide a setting for backcountry recreation activities, consisting primarily of hiking, skiing, and hunting opportunities, while meeting existing demand for commercial recreation opportunities consisting of aviation related special recreation permits	The North and South Blocks (317,096 acres) would be managed as Extensive Recreation Management Areas (ERMA). **ERMA Objective:** Same as Alternative E.	Designate a Special Recreation Management Area (SRMA) in eastern portion of North Block (65,467 acres). Remaining area within the North and South Blocks (251,629 acres) would be managed as Extensive Recreation Management Area (ERMA). **SRMA Objective:** Provide for primitive hunting and recreation opportunities, such as skiing and snowboarding, snowshoeing, hiking, camping, backpacking, hunting, wildlife viewing, and photography. **ERMA Objective**: Same as Alternative E.
Monitoring and Control Area	Retain MCA	Lift MCA	Lift MCA after 5-years	Lift MCA
Annual Landings Permitted through SRPs	Maximum of 2,700 landings permitted annually. **Recreation:** Maximum landings authorized represents no increase over the No Action alternative. **Wildlife:** Same as Alternative A **Acoustics:** Same as Alternative A **Lands with Wilderness Characteristics:** No permanent impairment of existing wilderness characteristics.	Maximum of 2,700 landings permitted annually. **Recreation:** Maximum landings authorized represents no increase over the No Action alternative. **Wildlife:** Same as Alternative A **Acoustics:** Same as Alternative A **Lands with Wilderness Characteristics:** Same as Alternative A	Maximum of 6,000 landings permitted annually. **Recreation:** Maximum landings authorized represents 122% increase over the No Action alternative. Current operators could expand business; new operators could also conduct permitted helicopter-supported recreation landings in the Planning Area. **Wildlife:** Potential impacts of noise and overflights would become more frequent and year-round; more backcountry trekkers could increase human/wildlife encounters. **Acoustics:** Based strictly on the numbers of helicopter-supported recreation landings authorized, this alternative could represent a 22% increase in summer and 900% in winter in the frequency of noise in excess of 75 dB; however, an increase in such authorized landings does not necessarily equate to more takeoffs from Haines/Skagway as flights may land several times in the backcountry without returning to town or at a base point along the local road system. Additionally, this alternative would distribute such landings across the seasons. **Lands with Wilderness Characteristics:** Same as Alternative A.	Maximum of 11,000 landings permitted annually. **Recreation:** Maximum landings authorized represents 307% increase over the No Action alternative. Current operators could expand business; new operators could also conduct permitted helicopter-supported recreation landings in the Planning Area. **Wildlife:** Same as Alternative F **Acoustics:** Based strictly on the numbers of helicopter-supported recreation landings authorized, this alternative could represent up to a 1733% increase in the frequency of noise in excess of 75 dB over the no action alterntive; however, an increase in such authorized landings does not necessarily equate to more takeoffs from Haines/Skagway as flights may land several times in the backcountry without returning to town or a base point along the local road system. Additionally, this alternative would distribute such landings across the seasons. **Lands with Wilderness Characteristics:** Same as Alternative A.

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3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter contains background information about the physical, biological, and socioeconomic resources, resource uses, and programs that exist or occur on the BLM-managed lands in the Planning Area. This information is provided to establish the environmental baseline for analysis of the direct, indirect, and cumulative effects analyses that will be presented in Chapter 4.0.

Topics discussed in this section are defined and limited by the issues identified during scoping for the Planning Area effort. The order in which topics are addressed is not intended to imply relative importance of the topic. Resources and resource uses within the Planning Area that are not discussed in this chapter are considered to be unaffected by the alternatives or unchanged from the Ring of Fire RMP.

3.2 Recreation

The BLM provides opportunities for outdoor recreation and nature-based tourism under the concept of multiple use management. Recreation activities on BLM-managed lands are multi-faceted and include consumptive activities, such as big game hunting, and non-consumptive, such as photography. The BLM-managed lands within the Planning Area provide a spectrum of dispersed and undeveloped outdoor recreation opportunities affording visitors the freedom of recreational choice with minimal regulatory constraints. The BLM-managed lands within the Planning Area are relatively inaccessible without the aid of a helicopter, airplane, or watercraft. Non-motorized activities (such as hiking, mountain biking, and climbing) are available. However, limited means of access substantially reduces opportunity for these activities.

3.2.1 Area Profile

The Coast Range is the highest of the three ranges in the Planning Area, with peaks reaching elevations slightly over 8,000 feet above sea level. These mountain ranges have terrain that is especially well suited for air tours, glacier landings, and heli-ski opportunities.

Recreation use on BLM-managed lands is low compared to other recreation areas in the region, including the Tongass National Forest and Glacier Bay National Park and Preserve. In Federal fiscal year 2017, the BLM reported 1,714 user visits within the Haines block lands (BLM RMIS 2017). In stark contrast to those numbers, Glacier Bay National Park received 547,017 visits in 2017 (NPS Statistics Park reports 2017) while the Juneau Ranger District of the Tongass National Forest received 628,000 visits in 2010 (USDA National Visitor Use Monitoring 2010).

The subject public lands are generally inaccessible to the average recreationist due to the remote roadless nature of the area. Current BLM information indicates there is limited recreation presence. There are no established roads or trails, other than a controlled access-mining road, to facilitate activities on BLM lands. The current Recreation Opportunity Spectrum of the area is primitive (ROF Vol. 3 appendices fig. 3.6-2).

3.2.2 Management of Adjacent Lands

State lands in the area are managed for an array of purposes and activities. The 286,000-acre Haines State Forest is managed under a plan adopted in 2002 for the utilization, perpetuation, conservation, and protection of land and water through multiple use management.

Approximately 42,000 acres of the managed State Forest lands are dedicated to timber harvest with an allowable harvest of 5.88 million board feet per year (AK DNR Division of Forestry). The 48,000-acre Chilkat Bald Eagle Preserve was established to protect and perpetuate the world's largest concentration of Bald Eagles and their critical habitat. It also sustains and protects the natural salmon runs and allows for traditional uses; provided such uses do not adversely affect preserve resources. The Preserve consists of river bottomland of the Chilkat, Kleheni, and Tsirku Rivers (AK DNR Division of Parks and Outdoor Recreation). Remaining state lands are managed under the Northern Southeast Area Plan, adopted by the AK DNR Division of Mining, Land, and Water in 2002.

U.S. Forest Service
Approximately 79 percent of the Forest falls within the Primitive or Semi-Primitive Recreation Opportunity Spectrum (ROS) classes (Tongass Forest Plan 2008). Forest lands near the Planning Area are undeveloped with the Tongass National Forest website displaying recreation facilities consisting of a public use cabin, two hiking trails, and one picnic site.

Haines Borough
The Haines Borough Comprehensive Plan also identifies recreation related goals and objectives. One of these goals is to capitalize on Haines' existing reputation and brand as a recreation destination and "Adventure Capital of Alaska" by expanding related businesses, jobs and commerce. In support of that goal, one action item identified is to provide certainty for both businesses and residents by preparing a heli-ski management plan that addresses safety, neighborhood quality, heliports, routes and areas of use, monitoring, and quality experiences.

3.2.3 Current Condition of Recreation Opportunities - *Roads and Trails*
There is one known road within the BLM Planning Area, which serves as an active access and operations road for mining activities. As such, access is regulated and controlled for the safety of recreational users and mine operations. There are also remnants of a historical route up the Chilkat River, which was historically utilized for trading and big game guiding activities. The entirety of BLM-managed lands in the area consists of steep and remote mountainous terrain. The current demand to provide access to the Planning Area is minimal to nonexistent, and such access that is provided occurs through fixed-wing aircraft and helicopters.

3.2.4 Recreation Resource Uses
BLM-managed lands account for approximately 34 percent of the current land ownership within the Planning Area (Table 1.1). Specific types of outdoor recreation, primarily consisting of heli-skiing, flight tours, and backcountry recreation, are the predominant uses in the Planning Area.

Due to land conveyance actions that transferred a large amount of acreage out of BLM ownership in 2005, the number of SRPs and subsequently, visitation on BLM lands, declined sharply. In 2004, eleven SRPs were authorized for heli-skiing, river rafting, and guiding-outfitting (Table 3.1). In 2007, three SRPs were issued and only one was issued in 2009 (Table 3.1). Visitation on BLM-managed lands simultaneously decreased during this time-period. Since 2015, a limited amount of heli-ski landings (300 winter) have been permitted in the Haines area. Additionally the BLM permits up to 2,400 summer landings out of Skagway as well as visitation by a commercial boat tour operator based in Skagway.

Summer Aviation-Supported Recreational Use
Authorized summer activities on BLM-managed lands include glacier landing tours and guided trekking. The amount of recreation use for air tours and glacier landings vary by year and are dependent upon factors such as weather, maintenance, and demand. Flight routes and landing zones are selected daily by the operator based on these factors, as well as to account for aircraft and passenger safety. Currently there are two BLM-permitted summer tour operators within the Planning Area, though other operators may choose to submit permit applications in the future. BLM has permitted activities such as flightseeing and glacier landing tours in the Planning Area since 1995. Permitted guided trekking trips in the Planning Area began in 2000. One operation has a similar permit with the U.S. Forest Service to operate on nearby Tongass National Forest lands since 1986 (USFS, 2009).

Winter Aviation-Supported Recreational Use
An authorized activity on BLM-managed land is considered a winter authorization if it occurs between January 15 and May 15; no such activities were authorized between 2005-2014.

Past authorized winter activities on BLM-managed lands have included helicopter-supported skiing (heli-ski) and associated commercial filming of heli-ski activities. The BLM currently authorizes three winter heli-ski operators within the southern portion of the Planning Area on a limited basis for 300 landings total between the three operators.

The typical heli-ski client guide ratio is 5:1. The ratio sometimes varies, but the maximum group size is generally limited to six, as a factor of helicopter capacity. Number of runs possible per day depends on weather conditions, skill, and stamina of the clients, and characteristics of the selected runs. For operators that use a multi-day “package” approach, six to ten runs, of about an hour in length, per group, is typical. Some clients prefer the option of paying by the individual run or engaging daily services, which most operators accommodate. Operators have typically made between two- and twelve-runs per day on BLM-managed lands over the past four seasons; although as many as 20 have been reported. Adverse weather conditions result in a significant number of “no ski” days during the approximately 90-day season between February and May.

Heli-ski activities are based at borough-approved locations off the Haines Highway as well as from the Haines airport. Future requests could be received from additional operators for more commercial heli-ski and filming in areas such as the Chilkat Range, as well as guided mountaineering adventures in the southern portions of the Coast Range, such as the Mount Harding and West Creek Glacier areas near Skagway.

Table 3.1 demonstrates the number of total annual aircraft landings authorized, actual landings reported, as well as winter-specific authorizations. The total landings authorized include all past summer and winter uses (glacier tours, trekking/mountaineering, commercial filming, and heli- skiing). Land conveyances from BLM to the State of Alaska, beginning in 2004, account for the majority of the decrease in total number of landings. Additionally, changes in TEMSCO's operations account for a significant decrease in landings on BLM-managed land annually, from 3,227 in 1995 to 348 in 2010, and 139 in 2011. In 2009, the U.S. Forest Service approved TEMSCO’s request for 2,800 landings annually on the Meade Glacier, which allowed TEMSCO to transfer that number of landings from the shrinking BLM-managed West Creek Glacier.

Table 3.1 Annual Historical Permitted Helicopter Use

Year	Total # of Summer Landings Authorized	Total # of Actual Summer Landings	# of Winter Landings Authorized	# of Actual Winter Landings
1993	3500	3440	n/a	n/a
1994	3500	3306	n/a	n/a
1995	3590	3227	n/a	n/a
1996	4375	3590	n/a	n/a
1997	6125	3875	n/a	n/a
1998	7200	4102	n/a	n/a
1999	8980	3675	480	26
2000	7580	3600	2880	14
2001	7580	3148	2880	48
2002	11480	3032	6780	380
2003	11780	2912	6780	350
2004	11880	2642	6780	321
2005	11980	2914	6780	300
2006	5200	2159	n/a	n/a
2007	5200	1943	n/a	n/a
2008	4700	1418	n/a	n/a
2009*	4700	925	n/a	n/a
2010	1900	348	n/a	n/a
2011	2400	155	n/a	n/a
2012	2400	222	n/a	n/a
2013	2400	370	n/a	n/a
2014	2400	108	n/a	n/a
2015**	2400	168	300	107
2016	2400	78	300	136
2017	2400	107	300	72
2018	2400	174	300	247
Average	5402	1986	1329	77

* In 2009, 2,800 landings were transferred off of BLM-managed lands to the nearby Meade Glacier, which is managed by the U.S. Forest Service. (Does not include fixed-wing aviation.)

** In 2015, the total number of winter landings for minimum winter permits was determined by a review of the actual number of landings between 2002 and 2005.

3.2.5 Recreation Area Designations

In August of 2014 BLM manual H-8320-1, Planning for Recreation and Visitor Services was updated. Accordingly, if the no action alternative (Alternative A) or the preferred alternative (Alternative G) is selected a recreation implementation level plan will be developed for lands affected by a SRMA designation. The recreation forms and templates for SRMAs and ERMAs have been updated for Alternatives E, F, and G.

Special Recreation Management Areas

In the 2008 Ring of Fire ROD, the BLM designated the North Block within the Planning Area as an SRMA. The established goals of the Haines SRMA identified within the Ring of Fire RMP include:

1. Manage recreation to maintain a diversity of opportunities.
2. Provide opportunities for commercial recreation consistent with area objectives for recreation management.

Management objectives for the Haines SRMA established in the 2008 Ring of Fire ROD include:

1. Manage the SRMA to maintain a diversity of opportunities, including designated Recreation Opportunity Spectrum classification.
2. Maintain the area for designated Visual Resource Management classification.
3. Develop further guidance for management of off-highway vehicle (OHV) use.
4. Manage commercial recreation activities to maintain the quality of user experience, avoid adverse effects on wildlife resources, and minimize disturbance to adjacent communities.
5. Work collaboratively with other landowners in the area, recreation users, and adjacent communities to develop management strategies and define enforcement responsibilities.

The 2019 Haines Supplemental Draft EIS presents an SRMA (Chilkat Mountains SRMA) in Alternative G. This alternative and supporting documents incorporate guidance from the 2014 BLM Manual H-8320-1, Planning for Recreation and Visitor Services. According to this guidance SRMA's are an administrative unit where existing or proposed recreation opportunities and resource setting characteristics are recognized for their unique value, importance, and/or distinctiveness, especially as compared to other areas used for recreation. Within SRMAs, recreation and visitor services are officially recognized as the predominant land use planning focus (BLM Handbook H-8320-1). Additionally expenditures of funds, development of facilities, and prioritization of work is usually greater within an SRMA.

Extensive Recreation Management Areas

An ERMA is an administrative unit that requires specific management consideration in order to address recreation use, demand, or recreation and visitor services program investments. Recreation is not the predominant land use plan focus within an ERMA unit. An ERMA is managed to support and sustain principal recreation activities while ensuring management is commensurate with other resources and resource uses (BLM Handbook H-8320-1). Alternatives E and G designate portions of lands within the North and South Block as an ERMA. Alternative F designates all land (317,096 acres) within the Planning Area as an ERMA.

Public Lands Not Designated as Recreation Management Areas

Lands not designated as recreation management areas are managed to meet basic recreation and visitor services and resource stewardship needs. Recreation is not emphasized on these lands. In Alternative A, 66,637 acres in the South Block are undesignated lands.

3.2.6 Monitoring and Control Area

In 2002, a MCA was established in the northwest portion of the Planning Area. With its establishment, commercial helicopter landings were prohibited within the MCA boundary with the intention of providing a source of consistent monitoring data if adaptive management changes become necessary. The original MCA described in the Ring of Fire RMP was 112,790 acres; however, after land conveyances to the State of Alaska, the MCA now consists of 98,004 acres (Map 2, see Chapter 7.0). The MCA boundaries were drawn based on where helicopter supported recreation had not occurred, due to the flight times from Skagway and the unsuitability of the glaciers in the area for landing zones.

3.2.7 Future Trends and Forecasts

Visitation and Population

From now until the year 2020, Alaska expects much slower growth in population than in previous decades. As the population increases, Alaska will continue to have a resource-based economy, and will continue to be a major travel destination as demand for access to Alaska's scenic and recreation resources is expected to continue to grow(ADNR, 2004). From the period of 2010-2017, the state population grew 4.2 percent from 710,231 residents to 739,795 residents (US Census Bureau Webpage). Within that same time period, the population of Haines decreased by 49 residents or by two percent (Haines Economic Baseline Report 2018). Skagway saw a growth of over 25 percent during this same time period growing from 920 residents to 1,157 (US Census Bureau Webpage).

Tourism is widely recognized as a critical component of the Haines economy (Haines Economic Baseline Report 2018, P.45). In Haines leisure and hospitality occupations provide for 22 percent of total employment (Haines Economic Baseline Report 2018 P. 19). Cruise ship passenger volume is expected to grow 33 percent in Haines from 2017-2019 (from 51,200 passengers) while highway border crossings have increased every year since 2011 (Haines Economic Baseline Report 2018 P.54). Increased tourism to Alaska will impact visitation numbers to the Planning Area, since a primary economic niche of the Planning Area is that of a tourist destination. In 2016, Haines welcomed over 94,000 non-resident visitors in the summer months. An estimated additional 2,000 winter recreation users also participated in winter activities such as heli-skiing and backcountry skiing (Haines Economic Baseline Report 2018, P.46).

Tourism is also highly important to the community of Skagway. Over 25 percent of businesses in Skagway describe tourism, recreation, hospitality, or accommodations as the primary focus of their enterprise (Skagway Alaska Business Climate Survey 2016, P. 7). Nearly one million people visit Skagway each year, primarily in the summer months (Skagway Convention and Visitor Bureau webpage). Cruise ship traffic to Skagway is also increasing, although at a slower rate (Haines Economic Baseline Report 2018 P.54).

Both Haines and Skagway serve as ports of call for cruise ships, and are terminals for the Alaska Marine Highway System. Once visitors arrive, many are dependent on commercial recreation providers such as fixed-wing aircraft or helicopters to access nearby public lands. Within the Planning Area, it is estimated that dispersed recreation increased two to three percent annually from 1998 to 2011, although, as previously mentioned, the number of SRPs has decreased since 2004 due to recent land conveyance actions within the Haines area. Higher gas prices, stagnant Alaska Ferry System passenger traffic (2015 Annual Traffic Volume Report Alaska Marine Highway System, P. 17) and the relatively low expense of visiting the region by cruise ship may continue to limit growth in independent highway travelers in the coming years.

3.3 Wildlife

Mountain Goats

Mountain goats *(Oreamnos americanus)* are considered an important species in the Planning Area because actions permitted in goat habitats, particularly in winter, may affect their movements and energy expenditures, their ability to use important habitats, vulnerability to predators, and ultimately, their productivity and survival.

Mountain goats occupy much of the mountainous terrain in the Planning Area. In general, mountain goat habitat selection in southeast Alaska is influenced by security from predators, movement to escape terrain, and by the ability to acquire food (Fox, Smith, & Schoen, 1989).

Goats within the Planning Area use cliffs and steep alpine and subalpine habitats in summer, a range of low elevation old growth forest up to higher alpine habitats in winter, (Schoen & Kirchoff 1982, White and Gregovich 2018) and can be found in these habitats throughout the region (Fox, Smith, & Schoen, 1989). Goat densities over all of southeastern Alaska average about 1.5 animals per square mile (Fox, Smith, & Schoen, 1989) with pronounced cycles in the population of twofold to fivefold in association with weather patterns and snow depth (Smith, 1984). The quantity and quality of winter habitat is the most limiting factor for mountain goats in southeast Alaska (Fox & Smith, 1988) (USFS, 2002b). Mountain goats in southeastern Alaska generally occupy habitats that provide abundant areas of high quality forage during summer, but use more limited feeding areas during winter because of deep snow. For much of the Planning Area, winter habitat is more spatially limited than summer habitat. Summer habitat selection closely resembles a high elevation wintering strategy as mountain goats select mid- slope or ridgetop areas in close proximity to cliffs (White, 2018).

Mountain goat home ranges are relatively small. A study of 28 radio-collared mountain goats in southeastern Alaska showed year-round home ranges from 10 to 20 square kilometers (Fox, Smith, & Schoen, 1989). Goats showed fidelity to preferred sites, especially in summer range, and returned there year after year.

Both male and female mountain goats are sexually mature at 18 months; however, reproduction at this age is unlikely. Females may become sexually reproductive at 30 months; however, many females first reproduce at 42 or 54 months of age (Bailey 1991, Côté and Festa-Bianchet 2003). Breeding occurs from late October to early December. Females give birth to a single kid mid-May to early June, usually in rocky outcrops or near cliffs that offer safety from predators (Côté & Festa-Bianchet, 2003, Festa-Bianchet & Côté, 2008). Based on surveys in the Juneau Ice Field, kidding habitat likely occurs throughout the project area in dense subalpine vegetation, usually between 1,000 and 2,000 feet in elevation (USFS, 2002b). Kids typically remain with their mother for one year, but may continue to associate with her for two years, with females forming nursery groups of kids, yearlings, and two-year olds of both sexes (Chadwick, 1977).

Nursery groups of females and kids have longer average daily movements and larger home ranges than solitary males, likely as an anti-predator strategy (Côté & Festa-Bianchet, 2003). Adult female mountain goats have heightened sensitivity to disturbances during kidding and post-kidding periods (Penner, 1988). Mountain goats typically live fewer than 12 years, with major causes of mortality including starvation in late winter and spring, predation by wolves and brown bears, and falling in steep terrain and avalanches (Côté & Festa-Bianchet, 2003). Adult female mountain goats have heightened sensitivity to disturbances during kidding and post-kidding periods (Penner, 1988).

Mountain goats typically live fewer than 12 years, with major causes of mortality including starvation in late winter and spring, predation by wolves (*Canis lupus)* and brown bears (*Ursus arctos)*, and falling in steep terrain and avalanches (Côté & Festa-Bianchet, 2003).

Population Abundance and Composition

Aerial surveys to estimate mountain goat population and composition are conducted annually by ADFG, typically in September. These surveys are dependent upon suitable weather conditions and sightability, and in some years, not all surveys are completed. Since 1983, ADFG has conducted surveys in Game Management Unit (GMU) 1D with the objective of identifying geographic areas for use as goat trend counts and management areas; to establish the minimum number of goats needed to provide harvest opportunities in the area; and to provide mountain goat viewing opportunities along the Haines and Skagway road system (Scott, 2008).

Aerial counts of mountain goats have limited precision and high amounts of variability (Gonzalez-Voyer, Festa-Bianchet, & Smith, 2001). In addition, because adult male goats are either solitary or in small groups, they are likely less observable than other sex-age classes (Risenhoover & Bailey, 1982). Kids and yearlings are difficult to classify from the air, adding more variability to age-class observations (Gonzalez-Voyer, Festa-Bianchet, & Smith, 2001).

Preliminary population data suggests that most of the survey areas have moderate to high levels of kid productivity relative to other areas surveyed in southeast Alaska, with the exception of the area between Burro Creek and White Pass, which has been characterized by very low proportions of kids (White et al. 2014).

In 1995, the BLM established a long-term mountain goat monitoring program, which continued until 2005. The objective of this monitoring project was initially to determine the distribution, age classification and population size of the mountain goats on BLM-managed lands in the Planning Area. Data were recorded on the number, age, class, sex, and locations of mountain goat groups. Mountain goat observations during these surveys show concentrations of goats along Takhin Ridge, in the Chilkat Range near Davidson Glacier, in the mountains at the source of the Nourse River, near the Chilkat Glacier, near the Ferebee Glacier, and at Hiteshitak Mountain near the Canadian border (Denton, 2006). The density and age class distribution for goats from this data has not been determined. With increased mountain goat research over the past decade, areas of mountain goat distribution are often referred to by their geographic location in 10 discrete regions. (See Table 3.2 Acres of High-Use Winter Mountain Goat Habitat).

Productivity and Survival

Beginning in 2010, radio-marked adult female goats were monitored to determine mountain goat productivity within the Haines/Skagway area. From 2010-2014, 68 percent of marked females had kids at side. This estimate is slightly higher than the longer-term estimates reported for the nearby Lynn Canal study area (White et al., 2014). Annual survival rates of 48 mountain goats monitored between 2010 and 2014 were calculated at 86 ± three percent with no statistical difference detected between male and female survival. Of the 19 mortalities over five years, all but two occurred during winter with 11 the result of avalanches. Although mortalities resulting from avalanches are not uncommon, an unexpectedly high proportion was reported in the Haines/Skagway study area relative to other similar studies in southeast Alaska (White et al. 2013). Relative to the mountain goat population in the Lynn Canal study area and the predator-free population of Baranof Island, the estimated survival in the Haines-Skagway area is said to be moderate (White et al. 2013, White et al. 2014).

Mountain Goat Winter Habitat Use

Mountain goat winter movements and habitat selection are influenced mainly by snow depth, as deep snow conditions are common and greatly reduce or eliminate the availability of food resources for goats (White & et al., 2011, Fox, Smith, & Schoen, 1989) and increase the cost of movement (Dailey & Hobbs, 1989). Generally, goat survival is lower in years with deeper snow depths (White K. S., 2009).

Goats face a trade-off in winter habitat use based on snow depth, predator escape terrain and food quality and availability. Telemetry data from the Chilkat River valley indicates mountain goats winter primarily on windswept, high elevation habitats (Hundermark, Eberhardt, & Ball, 1983). These data suggest goats winter in predator escape terrain with little food availability. Changes in winter habitat use also result in the goats feeding on lower quality forages in lower elevation forested habitats (Fox, Smith, & Schoen, 1989), and as a consequence, winter survival of mountain goats is highly dependent on their pre-winter body condition and their ability to conserve energy by adjusting their behavior and physiologic activities (White & et al., 2011).

White and Gregovich (2018) identified three distinct elevational wintering strategies used by mountain goats within the Planning Area, based on Global Positioning System (GPS) locations from 57 animals captured in the Haines/Skagway area between 2010 and 2016. A resource selection function (RSF) model, utilizing multiple variables, including elevation, slope, and distance to escape terrain, revealed a low/forest, medium/tree line, and high/alpine wintering strategy that generally tracked the coastal to interior gradient. For purposes of analysis, winter was defined as December 15 to April 14 (White and Gregovich, 2017). Within each geographic region, the proportion of animals utilizing each wintering strategy was identified. Some regions revealed only one strategy, while others two or all three. Low elevation wintering was more common near the coast, while high elevation wintering was more common in the interior. With the exception of elevation differences, mountain goat habitat selection was similar throughout the Planning Area as animals selected steep, rugged terrain in close proximity to cliffs.

Table 3.2 depicts the 10 geographic regions of the Planning Area and associated elevational wintering strategy and acres of high-use habitat within each region.

Table 3.2 Acres of High-Use Winter Mountain Goat Habitat

Geographic Region	Elevational Wintering Strategy	Acres
Nourse	High-Medium	46,598
Chilkoot-Ferebee	High-Medium-Low	70,729
Takshanuk	High-Medium-Low	44,751
Takhinsha	Medium-Low	42,129
Takhin	Medium-Low	23,514
Four Winds	High-Medium	15,799
Hiteshitak	High	6,664
Summit	Medium-Low	6,088
Mt. Raymond	High	2,041
Porcupine	High	12,141

Given winter habitat constraints, reproductively active male mountain goats are most vulnerable to mortality, because male goats, unlike females, greatly increase movement rates and decrease foraging activity during the rut in early winter (White, 2006, Mainguy & Côté, 2008, Pelletier, Mainguy, & Côté, 2008). As a consequence, males are more likely to begin the critical winter period in poorer body condition than females, and are more likely to die later in the winter as a result (White & et al., 2011). White et al., (2011) found the highest overall mortality rates in April in the Berner's Bay area of Lynn Canal, adjacent to the Planning Area.

Mountain Goat Summer Habitat Use

White and Gregovich (2018) developed a summer habitat RSF model based on 64 radio-collared animals captured within the Haines/Skagway area between 2010 and 2016. For purposes of analysis, summer was defined as June 15 to September 30 (White and Gregovich, 2017). Habitats selected during summer were very similar to that of the high elevation wintering strategy, previously described. Habitat use at approximately 1,050 meters was common and use adjacent to cliffs was broadened relative to winter months, provided animals were within 250 meters of escape terrain.

Movement Patterns

GPS location data from the radio collars have shown that goats have distinct seasonal variation in activity and movement patterns. Activity and movement rates are highest in June through August, and reduce significantly during the winter months (October-April), when deep snow is prevalent on mountain goat winter range and animals must conserve energy to survive the winter period (White, Crupi, Scott, & Seppi, 2011).

Genetics

Increased knowledge of mountain goat genetics has been gained in southeast Alaska in the past decade. Based on both mitochondrial and microsatellite DNA, Shafer et al. (2011) identified additional post-glaciation refugia for mountain goat in northern British Columbia and the Alaskan coast. In Alaska specifically, goats in the Haines and Skagway areas are identified as being genetically unique and harboring the descendants of a refugial population (Shafer et al. 2011).

ADFG has in the past, and continues, to bolster the genetic information available for broad-scale analysis as they provide tissue samples from mountain goat captures and animals harvested through registration hunts within southeast Alaska (White, 2014). Incorporating this additional information suggests limited dispersal across valley floors within the Planning Area as there is high genetic differentiation among geographic regions (A. B.A. Shafer, personal communication 6/19/2017). Lomolino and Davis (1997), too, reported limited dispersal across intervening valleys resulting in natural habitat fragmentation, leading to isolation and reduced gene flow between mountains. Goats are alpine habitat specialist, often spending much time at higher mountain elevations. Therefore, it stands to reason that mountain ranges facilitate gene flow while valleys would be an impediment as goats are less likely to cross non-alpine, low elevation drainages.

Morphological data collected during ADFG mountain goat captures in 2010-2011 revealed larger bodied animals, particularly males, than in other areas of southeast Alaska. The largest male and female weighed 385 lbs. and 256 lbs., respectively, while weights of 280 lbs. and 180 lbs. are more typical. The ultimate cause for increased size is not fully understood, but it is hypothesized to be a result of genetic insularity and/or sexual selection (White, 2014).

Current Mountain Goat Management

Mountain goats are an important game species statewide with populations open to hunting annually within the Planning Area. ADFG administers three registration hunts on BLM-managed lands within the Planning Area. These hunt opportunities, unlike many others around the state, are utilized primarily for food harvest rather than trophy hunting (Sell, 2014). Mountain goat populations are very sensitive to overharvest as kid production is low and age at first reproduction is late (Côté & Festa-Bianchet, 2001). Other characteristics making mountain goats vulnerable to overharvest include high frequency of reproductive pauses in females; low kid and yearling survival; and the likelihood of orphaned kids dying during winter (Innes, 2011). Rice and Gay (2010) stated mountain goat populations below 50 animals should not incur hunting harvest while those populations above 100 may sustain a harvest of 4 percent if the majority (90 to 100 percent) of the harvest is males.

In GMU 1D, ADFG has a management objective to maintain harvest within management areas not to exceed 6 points (males = 1 pt., female = 2 pt.) per 100 adult goats observed during aerial surveys. The most recent available data from ADFG (Sell, 2014) reports populations to be at medium to high densities within those portions routinely surveyed in the unit. Survey efforts are often concentrated in the most heavily hunted areas such as Takhin Ridge and the Takshanuk Mountains. An average of 32 mountain goats were harvested annually between 2003 and 2012 with a high of 43 in 2007 and low of 23 in 2012. Although a growing helicopter-supported tourism industry within the area has increased concern for potential effects to mountain goats, within the unit, based on the total number of goats, percent of kids, and number of goats seen per hour of survey time, ADFG reported the goat population appeared to be healthy overall when last reported in 2014 (Sell, 2014). Little is currently known of the specific short- or long-term population trends of mountain goats in the Planning Area. ADFG conducted mountain goat surveys within the Planning Area in 1973-1975, 1977 and 1980-1987 to determine the area’s population size for the management of sport harvest (Denton J., 2006).

Additionally, periodic aerial composition counts for mountain goats have been conducted by ADFG in GMU[1] 1D since 1983. The objectives are; identifying geographic areas for use as goat trend counts and management areas; to establish the minimum number of goats needed to provide harvest opportunities in the area; and to provide mountain goat viewing opportunities along the Haines and Skagway road system (Scott, 2008). ADFG's management objectives have not changed since helicopter use has been permitted in the area (Scott, 2008, Hessing, 2004).

Buffer distances necessary to protect goats from helicopter disturbance have been established in Alberta and British Columbia, Canada (Côté S. , 1996, Foster & Rahs, 1983) and in the Chugach Mountains of Alaska (Goldstein & et al., 2005), and some of these measures have been modified and adopted on the Tongass National Forest for helicopter recreation activities. A position statement by the Northern Wild Sheep and Goat Council (NWSGC) (Hurley, 2004), suggests, "Helicopter activity should not occur within 1.5 km of occupied/suspected nursery group or crucial winter range habitats during critical periods." Similarly, Cadsand (2012) made recommendations of buffering helicopter activities and mountain goat habitat by 1.5 km - 2 km and Cote et al. (2013) recommended helicopter flights do not approach closer than 1,500-meters of goat groups.

Currently in the Tongass National Forest, helicopters are required to maintain a 1,500-foot vertical and horizontal distance from all observed wildlife (USFS, 2002b). In addition, a one-mile buffer is maintained between helicopter landing sites and important mountain goat kidding areas from May 15 to June 15 each year (USFS, 2002b).

Previous Mountain Goat Survey Efforts

Because most goats live in rugged, mountainous terrain, population surveys use helicopters or fixed-wing aircraft, usually in summer, when goats are easy to see (Denton J., 2006, Côté & Festa-Bianchet, 2003). Aerial counts of mountain goats have limited precision and high amounts of variability (Gonzalez-Voyer, Festa-Bianchet, & Smith, 2001). In addition, because adult male goats are either solitary or in small groups, they are likely less observable than other sex-age classes (Risenhoover & Bailey, 1982). Kids and yearlings are difficult to classify from the air, adding more variability to age-class observations (Gonzalez-Voyer, Festa-Bianchet, & Smith, 2001).

In 1995, the BLM established a long-term mountain goat monitoring program, which continued until 2005. The objective of this monitoring project was initially to determine the distribution, age classification and population size of the mountain goats on BLM-managed lands in the Planning Area. Twenty transect strips were to be flown every June from 1995-2005 in Husky and Piper super-cub fixed-wing aircraft, although not all transects were flown each year, as the weather did not allow flights in some areas in some years. Flights were flown at 400 meter contour lines inside each transect strip. The survey flight path followed contours starting along the lowest contour and ending at the contour along which goats were no longer detected.

Data were recorded on the number, age, class, sex, and locations of mountain goat groups. Mountain goat observations during these surveys show concentrations of goats along Takhin Ridge, in the Chilkat Range near Davidson Glacier, in the mountains at the source of the Nourse River, near the Chilkat Glacier, near the Ferebee Glacier, and at Hiteshitak Mountain near the Canadian border (Denton J., 2006). The density and age class distribution for goats from this data has not been determined.

[1] The Planning Area is located within state game management area, GMU 1D. This is a close equivalent for state wildlife management in the area.

In 1995, a joint BLM and U.S. Forest Service environmental analysis was completed (AK-040-95-EA-015) to address the potential impacts of helicopter-supported special recreation, particularly summer glacier landings and winter heli-skiing and filming operations in or near mountain goat habitats on BLM and U.S. Forest Service lands. The BLM's goat monitoring data was used to establish a baseline for goat population size and distribution, and to adjust permit stipulations of permitted helicopter activities for the area. The Record of Decision required development of a mountain goat monitoring plan to attempt to evaluate goat population responses to the activities. Permitted helicopter landings have been renewed annually since 1995, and updated Environmental Assessments were completed in 2000, 2001, and 2002 that included analysis of glacier tours, heli-skiing/filming, and helicopter-supported mountaineering.

Monitoring and Control Area
In 2002, a MCA was established that prohibited helicopter landings. The intent was to set aside an area that had not been impacted by permitted helicopter landings for study. The boundaries of the area were drawn based on where permitted helicopter landings had not occurred, due to the flight times from Skagway, and the unsuitability of the glaciers in the area for landing zones. Since 2002, no permitted helicopter activities have occurred within the BLM boundary. Fixed-wing aerial population surveys have taken place most years within portions of the MCA. Since 2010, this has included limited use of helicopters to capture and radio collar goats.

3.4 Acoustical Environment

Skagway
TEMSCO's tour and flight operations are located at the south end of the City of Skagway, immediately adjacent to the airport, train terminal, and the ship-docking facilities. The existing acoustical environment in this part of town is dominated by the sounds of engines for transportation-related industries. Small turbo-propeller planes take off and land several times a day at the airport, diesel engines power freight and tour trains, busses shuttle tourists to and from the cruise ship dock, and cruise ship engines idle to provide power while the ships are in port. Each of these sounds has a different magnitude (loudness), frequency (pitch), timing, duration, and frequency of occurrence. Noise from a variety of engine and transportation sources occur throughout the day at this location and noise from helicopter flights is considered part of the normal background noise. The background noise at this location is low to moderate most of the time and does not impede the ability of tourists to use a normal conversation voice at the cruise ship dock. Louder noises occur intermittently for brief periods when planes or helicopters take off, a train whistles, or a ship horn blows. A sound survey conducted in Skagway in 1989 provides general reference sound levels for different activities around the city (Bon 1989 as referenced in the Environmental Assessment for Helicopter Landing Tours in the Skagway and Haines Area (USFS, 1995)). Results of the survey show the loudness of the White Pass and Yukon Train whistle (105 dB), the Fairweather cruise ship when docking (100 dB), and an A-Star 350 helicopter, which is one of the models flown by TEMSCO, when taking off and landing (81 dB).

For comparison, Table 3.3 shows the typical noise levels for a variety of noise sources that are encountered around the home environment.

The Klondike Gold Rush National Historical Park is located a few miles northwest of Skagway at the mouth of the Taiya River. This location is separated from Skagway by distance and a prominent ridge which isolates noise generated in Skagway from being heard at the National Historical Park. The National Historical Park setting is more rural in nature than the City of Skagway; however, the visitor center, campground, and indoor and outdoor tour activities conducted throughout the tourist season also generate low levels of noise. Helicopter flights that conduct landing tours on the West Creek and Chilkat Glaciers on BLM land fly along the hillslope immediately west of the park. Sound measurements taken at the Dyea Ranger Station recorded the loudness of a Hughes 500D at approximately 1,000 feet altitude as 20 dB

(Bon 1989 as referenced in the Environmental Assessment for Helicopter Landing Tours in the Skagway and Haines Area (USFS, 1995)). It is assumed that this 20 dB measurement reflects 20 dB above ambient levels, although the document does not explicitly state such.

Table 3.3 Noise Sources and Effects

Noise Source	Decibel Level	Noise Effect Spectrum
Maximum Output of Stereo	100-110	110 dBA Human pain threshold
Circular Saw	100-104	--
Leaf Blower	95-105	100 dBA Serious hearing damage (8 hrs.)
Weed Whacker	94-96	--
Food Processor	93-100	--
¼" Drill	92-95	--
Air Compressor	90-93	--
Lawn Mower	88-94	--
Handheld Electric Mixer	86-91	--
Coffee Grinder	84-95	90 dBA Hearing damage (8 hrs.)
Vacuum Cleaner	84-89	--
Electric Can Opener	81-83	--
Hairdryer	80-95	--
Air Popcorn Popper	78-85	--
Garbage Disposal	76-83	80 dBA Possible hearing damage
Inside Car, Windows Open, 30 MPH	72-76	--
Kitchen Exhaust Fan, High	69-71	--
Handheld Electronic Games	68-76	--
Inside Car, Windows Closed, 30 MPH	68-73	--
Push Reel Mower	68-72	--
Phone	66-75	--
Clothes Washer	65-70	70 dBA Annoying
Dishwasher	63-66	--
Alarm Clock	60-80	--
Window Fan on High	60-66	--
Printer	58-65	--
Clothes Dryer	56-58	--
Normal Conversation	55-65	--
Microwave	55-59	60 dBA Quiet
Bathroom Exhaust Fan	54-55	--
Background Music	50	--
Radio Playing in Background	45-50	--
Forced Hot Air Heating System	42-52	--
Typical Living Room	40	--
Refrigerator	40-43	--
Quiet rural area	30	--
Quiet Room	28-33	30 dBA Very quiet
Grand Canyon at Night (no roads, birds, wind)	10	--

Haines

The City of Haines is located approximately 15 miles south of Skagway and approximately 6 miles northwest of the mouth of the Katzehin River. Sound measurements have not been measured in Haines, but the ambient (background) noise levels in Juneau were measured during studies for the Juneau Ice Field landing permit process, and include many of the noise sources, such as aircraft noise, that are also present in Haines. The ambient noise in Haines is a product of passenger cars and trucks, large truck transportation, shipping, light manufacturing, and construction activities. General ambient noise levels around the city center can be expected to range from approximately 60 to 80 dB, while noise levels in the surrounding rural residential areas would be expected to be approximately 50 to 70 dB (Airport Noise Law, 2008). The noise level that could be attributed to TEMSCO's flights along Chilkoot Inlet (at three miles distance) would be a maximum of 56-58 dBA at their closest point to Haines (USFS, 2009).

The Battery Point State Park is located on the Chilkat Peninsula immediately southeast of Haines. This park is a common recreation area for residents of Haines and is often used by tour groups during the summer tour season. The park has a visitor center, 15-site campground, picnic area, boat launch, and three trails. The Battery Point Trail follows the eastern shoreline of the peninsula and is approximately two miles across Chilkoot Inlet from the mouth of the Katzehin River. The common ambient sound levels in the park would be expected to range from 40 to 60 decibels (dB), typical of a forested ambient level. Short periods of noise levels at the upper end of this range would occur as a result of overhead planes, boats along the shoreline, or adverse weather conditions such as wind and rain.

Surrounding Lands

The Tongass National Forest along the eastern shore of Taiya and Chilkoot Inlet is comprised of undeveloped forest, riparian, sub-alpine, and alpine ecosystems. There are no designated recreation facilities or existing trails within this area, and recreational and subsistence hunters, or glacier tour customers, account for most of the use. Ambient noise levels for general forested areas of the Tongass National Forest have not been measured, but measurements have been made of the Mt. Baker-Snoqualmie National Forest, which is a similar temperate rainforest climate. Identified ambient noise levels were between 52 and 60 dB (WSDOT, 2011) for undisturbed forested areas. The Olympic National Forest programmatic biological assessment uses an estimated ambient noise level of 40 dBA for undisturbed forested areas (WSDOT, 2011). Weather conditions such as wind or rainfall can increase the ambient noise level. Locations near rivers or shorelines have higher ambient noise levels as well (USFS, 2009).

Currently, in addition to the flight routes for TEMSCO and AMG, there are five authorized landing areas for helicopters on BLM-managed lands that would be affected by helicopter noise. These are Ferebee Glacier, Nourse Glacier, Grand Canyon Glacier, Harding Glacier, and Chilkat Glacier.

Aviation Noise

Noise is generally defined as unwanted sound, or any sound not occurring in the natural environment. Noise has characteristics that may annoy a listener, interfere with a listener’s activities, or cause hearing loss or health concerns. The annoyance that a listener experiences from a sound is based on the amplitude (loudness), frequency (pitch), and context in which the sound was heard (listener’s expectations and ambient noise levels) (USFS, 2009).

Noise is measured and described by numerous characteristics, the most common one being the decibel level (dB), which expresses the sound pressure level. Aircraft noise is a type of transient noise that is characterized by a sound that increases over a period of time to a maximum level, then decreases back to the normal background noise level (USFS, Meade Glacier Heli-Tour Landings EA, 2009).

Sound measurements of the A-Star 350 helicopter, which is one of the models flown by TEMSCO, have been conducted by the FAA to determine its general noise characteristics. Measurements were taken in controlled conditions with the helicopter flyover at 500 feet above ground at an airspeed of 100 miles per hour. The average peak noise level of the helicopter is 81 dBA (FAA, Noise Measurement Flight Test: Data/Analyses FAA-EE-84-05, 1984). The FAA has not repeated the study since 1984 and improvements in aircraft noise reduction may have reduced this measured noise level since then, although it is unknown how much of a reduction may have occurred (USFS, Meade Glacier Heli-Tour Landings EA, 2009).

Additional information on aviation noise is found in the 2004 U.S. Forest Service Final EIS on Commercially Guided Helicopter Skiing on the Kenai Peninsula (page 3-3 and 3-4), (as quoted on p. 4-1 in the Alaska Quiet Rights Coalition's "Helicopter-Supported Commercial Recreation Activities in Alaska" report).

The Federal Aviation Administration has published some detailed noise outputs of light aircraft and helicopters. For example common models such as the Cessna 206 generate 70 dB and the Piper PA-18 Super Cub generates 60 dB on takeoff. In level flight at 500 feet elevation, an A-Star 350 helicopter used by [Chugach Powder Guides] produces 75 dB, at 1,000 feet. During power ascent and landing approaches sound are the loudest, 87.1 to 94.5 dB. (Welch-Rodman & Loeffler, 2006).

3.5 Cultural Resources

The Chilkat, Chilkoot, and Skagway tribes, located at the head of Lynn Canal, are federally recognized tribes (Goldschmidt and Haas 1998:27), and are spread between the communities of Klukwan, Haines, and Skagway. Historically, they were part of the same people, the Chilkat or Jil<u>k</u>aat <u>K</u>waan, who occupied different villages in the Lynn Canal area. There were four villages along the Chilkat or Chilkoot Rivers, including Tlákw.aan (Klukwan), Kaatx'waaltú (Eighteen Mile Haines Hwy.), Yeindust'a<u>k</u>yé (Haines Airport) and L<u>k</u>oot (Chilkoot Lake), as well as two small villages along Taiya Inlet, Dayéi (Dyea River Mouth) and Shgagwei (Skagway). In this region Tlákw.aan or Klukwan, also known as the "Eternal Village," was the largest and oldest village as well as the most influential (Thornton 2012:48).

The Chilkat had place names throughout the Planning Area (Thornton 2012). Additionally, there are locations within the Planning Area that are reported to be places of traditional religious and cultural importance. One of these areas is Takshanuk Mountain, also known as Dakshaa (Thornton 2012:59), which sits above Klukwan village to the northeast and is shown in Map 7. Government-to-Government meetings with the Chilkat Indian Village in 2018 indicated that Takshanuk Mountain carries spiritual meaning for the tribe. It is also important because Klukwan Village has been located at the base of this mountain since its beginnings, and the mountain has helped define the village and its people by its presence.

Woven from mountain goat wool and cedar bark, the Chilkat Dancing Blanket is the iconic art form associated with the Chilkat natives because it was produced in the later historic period only by this group of Tlingit (Emmons 1991:224; Hotch 2013). About three goat hides were required for each blanket with late winter hides being preferred, although hunting also occurred in spring, and fall. These blankets have cultural significance throughout Southeastern Alaska's Tlingit, Haida, and Tsimshian natives for their ceremonial dance use and are tied to clan, moiety, and village identity (Hotch 2014). Their dyed wool knitted designs can represent clan and moiety crests and crests on blankets can also represent villages through depictions of landforms like mountains (Hotch 2014).

Traditionally, goat-hunting areas were owned by clans and families but could be used by other clans with permission (Goldschmidt and Haas 1998:27). The entire northern stretch of the Chilkat River above its confluence with the Kelsall River was the major source of mountain goats for the tribe (Goldschmidt and Haas 1998:32-33). The mountains above Mosquito Lake along the Chilkat River as well as the mountains along the Tsirku River were also used for hunting mountain goats. Similarly, there was a hunting camp for bear and goat up the Chilkoot River near the falls.

Historically, goat hunters from Klukwan hunted mountain goats along Takshanuk Ridge and the east side of Upper Chilkat River Valley during the winter months for goat hides at their prime condition (Emmons 1991). In these areas, wildlife biologists (White and Gregovich 2018) suggest that two distinct populations of mountain goats are split in their wintering strategies between low, medium, and high elevations along those ridges. Large percentages of those populations, or about 25 percent to 30 percent of the Takshanuk Ridge and Ferebee/Chilkat goats, winter in lower elevations, where they would have been the most accessible to winter or spring hunters.

The land in the Planning Area includes prehistoric and historic routes to the interior owned by Chilkoot and Chilkat Tlingit people, which were important trade routes for a variety of commodities. During the Russian period, the Tlingit sent trade goods to the interior and down the Yukon, providing competition to the Hudson's Bay Company in the fur trade (McClellan, 1981).

Later, Tlingit packers profited by assisting Klondike Gold Rush miners ascending the passes to get to the Upper Yukon River gold fields (Brooks, 1973). Tlingit travel and trade routes in the Planning Area include: the Chilkoot Trail near the Dyea River; the Dalton Trail along the Klehini River through Dawson Pass (Goldschmidt and Haas 1998:32); the Chilkat River Trail over the Leslie Glacier and to Lake Kusawa in Canada (Glave 2013:26-42); a route along the Kelsall River was also used as a route to the interior but was considered to be a harder route (Goldschmidt and Haas 1998:32). These trade routes are depicted in Map 13 in Chapter 7.

Many of these prehistoric and historic period travel routes between the coast and interior pass over glaciers and ice patches, including the Chilkat Trail's route over the Leslie Glacier (Glave 2013). These glaciers as well as semi-permanent ice patches along other travel, trade and hunting routes have the potential to retain well preserved organic artifacts or human remains like the "Long Ago Person Found" from the nearby Tatshenshini-Alsek Provincial Park near the Yukon border in 1999 (Shuster 1999a; Dickson and Mudie 2008; Reckin 2013:324-325). His last meals indicated that he was travelling from the coast into the interior along a high mountain path. Additionally, a number of discoveries have been made in the coastal mountains of southwest Yukon on high alpine, semi-permanent ice patches, where human hunting artifacts associated with the prehistoric use of ice patches by primarily caribou were discovered (Hare et al. 2004). These discoveries leave the possibility that glaciers or ice patches near trade routes or hunting areas in the Planning Area could reveal undiscovered cultural resources, during warm summer, high snowmelt years. These rare, well-preserved organic, archaeological resources are likely to be culturally significant to the area's Federally Recognized Tribes as well as Canada's First Nations.

Currently, there have been only a handful of archaeological surveys within the Planning Area, which were mainly focused on the Upper Chilkat River (Steel 1989, Jangala Unfinished Manuscript). There are no data available for ice patch or glacier archaeology within the Planning Area. This limits the development of an ice patch and glacier archaeology probability model to inform decisions about the potential impacts of summer helicopter-supported recreation in the Planning Area.

3.6 Socio-Economics

The Haines Borough is a home-rule consolidated municipal government with a land area of over 2,300 square miles and includes the unincorporated communities of Covenant Life, Haines, Lutak, Mosquito Lake, and Mud Bay. The Skagway Borough is a First Class consolidated City-Borough, which means that the laws that govern its powers, duties and functions are defined by state law. The Chilkoot Indian Association (CIA), a federally recognized Tlingit Indian tribe, is composed of approximately 400 members who live interspersed within the larger Haines community (CIA 2008; Cultural Survival 2016). CIA membership is available to all Alaskan Natives and American Indians who are permanent residents of Haines (CIA 2008). Klukwan is a traditional Tlingit settlement and is home to the Chilkat Indian Village (CIV), a federally recognized tribe. Klukwan is not within the Haines Borough, but is a separate CDP within the Hoonah-Angoon Census Area. Members of CIA and CIV are represented by the Sealaska Corporation, an ANCSA regional corporation. Klukwan, Incorporated is the village corporation associated with the CIV.

3.6.1 Populations

The U.S. Census Bureau American Community Survey (ACS) estimated the population of the Haines Borough at 2,557, the population of the Skagway Borough at 1,157 and the population of Klukwan at 66 for the 2010 to 2014 period (USCB 2016). Since 2000, net migration (accounting for in- and out-migration) in the Haines Borough has fluctuated, ranging from +74 people in 2009 to 2010 to -76 people in 2012 to 2013, with an average of +3 people per year from 2000 through 2015 (ADLWD 2016b). The percentage of change in population for Skagway between 2010, with a population of 968, and 2017, with a population of 1,157, has varied 19.8 percent (USCB 2018). Migration data specific to Klukwan is not available from ADLWD, but the independent, non-profit research group, Headwaters Economics' Economic Profile System shows a substantial decrease in Klukwan's population from 2000 to 2014. During this time period, the population of Klukwan decreased from 139 to 66 individuals, a 52.5 percent change (Headwaters Economics 2016).

The median age in the Haines Borough is estimated at 43 years, and individuals of Native heritage comprised 13.8 percent of the population for the 2010 to 2014 time period (USCB 2016). The median age in the Skagway Borough is estimated at 44.4 years, and individuals of Native Alaskan or American Indian heritage comprised about 5 percent of the population for the same period. In Klukwan, the median age is estimated at 54 years, and approximately 82 percent of the population is comprised of individuals of Native heritage (USCB 2016).

3.6.2 Haines Borough, Skagway Borough and Klukwan Village Economies

The main employment sectors in the Haines Borough are government (state and local); trade, transportation, and utilities; leisure and hospitality; and educational and health services (ADLWD 2018). Ratios between employment in these sectors remained consistent between 2012 and 2016, but fell in general during this period (Table 3.8). The visitor industry in Haines is considered the largest industry segment in town, with about 94,000 non-Alaskan visitors in 2016, spending an average of $111.00 while in town and contributing 10.4 million to the local economy (HEBR 2018). Within the Haines Borough, total wages collected in the 2012 to 2016 time period ranged from $29,671,951 in 2012 to $28,247,877 in 2016 (ADLWD 2018). The average yearly income in 2012 for 1035 working residents of the borough was $27,293. Average yearly income for the 944 working residents in 2016 was $31,432. The annual average unemployment rate (not seasonally adjusted) in Haines ranged from 10.0 to 10.3 percent from 2012 to 2016, and the number of unemployment insurance claimants ranged from 239 in 2012 to 153 in 2016 (ADLWD 2018).

Table 3.4 Employment by Industry in Haines Borough, 2012 and 2016

Industry	2012 Number[a]	2012 Percent[b]	2016 Number[a]	2016 Percent[b]
Natural Resources and Mining	36	3.5	40	4.2
Construction	79	7.6	78	8.3
Manufacturing	23	18.6	34	3.6
Trade, Transportation and Utilities	193	18.6	181	19.2
Information	16	1.5	13	1.4
Financial Activities	19	1.8	27	2.9
Professional and Business Services	43	4.2	31	3.3
Educational and Health Services	138	13.3	125	13.2
Leisure and Hospitality	161	15.6	146	15.5
State Government	100	9.7	70	7.4
Local Government	197	19.0	166	17.6
Other	29	2.8	29	3.1
Unknown	1	0.1	4	0.4
Totals	1,035	100	944	100

Source: ADLWD 2018
Notes:
[a] Number of residents employed
[b] Percent of total employed

The main employment sectors in the Skagway Borough are trade, transportation, and utilities; local and State government; and leisure and hospitality. Employment in these sectors remained consistent between 2012 and 2016 (Table 3.9). Like Haines, the visitor industry in Skagway is considered the largest industry segment in town, with about 1,305,133 tourist and other visitors arriving in town by cruise ship, ferry, highway, and by air in 2017 (MOSB 2018). Within the Skagway borough, total wages collected in the 2012 to 2016 time period ranged from $14,282,338 in 2012 to $17,070,330 in 2016 (ADLWD 2018). The average yearly income in 2012 for 433 working residents of the borough was $32,985. Average yearly income for the 477 working residents in 2016 was $35,787. The annual average unemployment rate, which is not seasonally adjusted, in Skagway ranged from 14.1 to 11.3 percent from 2012 to 2016, and the number of unemployment insurance claimants fell from 121 in 2012 to 115 in 2016 (ADLWD 2018).

Local and state government is the largest employment sector in Klukwan, with 63 percent of employed individuals in Klukwan working in government in 2016 (ADLWD 2018), primarily in local government (Table 3.9). Total wages collected in the 2012 to 2016 time period ranged from $714,573 in 2012 to $873,098 in 2016. The average yearly income in 2012 for 47 working residents of the borough was $15,204. Average yearly income for the 477 working residents in 2016 was $18,980. The number of unemployment insurance claimants in Klukwan ranged from 14 in 2012 to 8 in 2016 (ADLWD 2018).

Table 3.5 Employment by Industry in Skagway Borough, 2012 and 2016

Industry	2012 Number[a]	2012 Percent[b]	2016 Number[a]	2016 Percent[b]
Natural Resources and Mining	1	0.2	1	0.2
Construction	27	6.2	41	8.6
Manufacturing	13	3.0	13	2.7
Trade, Transportation and Utilities	155	35.8	156	32.7
Information	0	0	1	0.2
Financial Activities	12	2.8	17	3.6
Professional and Business Services	13	3.0	13	2.7
Educational and Health Services	12	2.8	5	1
Leisure and Hospitality	76	17.6	85	17.8
State Government	21	4.8	16	3.4
Local Government	87	20.1	110	23.1
Other	16	3.7	15	3.1
Unknown	0	0	4	0.8
Total	433	100	477	100

Source: ADLWD 2018
Notes:
[a] Number of residents employed
[b] Percent of total employed

Table 3.6 Employment by Industry in Klukwan Village, 2012 and 2016

Industry	2012 Number[a]	2012 Percent[b]	2016 Number[a]	2016 Percent[b]
Natural Resources and Mining	1	2.1	0	0
Construction	3	6.4	3	6.5
Manufacturing	0	0	0	0
Trade, Transportation and Utilities	4	8.5	4	8.7
Information	0	0	0	0
Financial Activities	0	0	0	0
Professional and Business Services	3	6.4	0	0
Educational and Health Services	4	8.5	5	10.9
Leisure and Hospitality	2	4.3	4	8.7
State Government	1	2.1	2	4.3
Local Government	27	57.4	27	58.7
Other	2	4.3	1	2.2
Total	47	100	46	100

Source: ADLWD 2018
Notes:
[a] Number of residents employed
[b] Percent of total employed

Median household income in the Haines Borough and Klukwan, as well as per capita income in Klukwan, is lower than in the State of Alaska as a whole, while per capita income in the Haines Borough is similar to that of the state (Table 3.10, below). A higher percentage of individuals in Haines are estimated to be below the poverty level than in the state as a whole, while an even higher percentage of individuals in Klukwan are estimated to be living below the poverty level. Wages comprise the largest source of income in the study area; other sources include Native corporation dividends for shareholders, retirement and social security benefits, and other benefits.

Table 3.7 Income and poverty level in Haines Borough, Skagway Borough, Klukwan Village, and the State of Alaska

Area	Per capita income[a]	Median household income[a]	Percent of individuals below poverty level
Haines Borough	$32,673	$53,125	10.3
Skagway Borough	$39,412	$64,853	4.4
Klukwan	$24,602	$42,083	12.5
State of Alaska	$34,191	$74,444	9.9

Source: USCB 2018, 2012-2016 ACS 5-year estimates
[a] 2016, inflation-adjusted dollars.

3.6.3 Helicopter-Supported Recreation Economy

The Haines Borough currently only authorizes winter helicopter-supported recreation and does not authorize summer helicopter tours. Within the Haines Borough, there are three winter helicopter recreation operators permitted for up to 2,600 user days. Additionally, 300 landings are permitted on the BLM-managed South Block lands.

Generally, the aircraft used by these operators, an "A-Star", can carry a maximum of six heliskiers per flight. A single heliski run consists of two landings, a drop-off and pick-up, and on average costs $212 per client. Therefore, a single aircraft could be earning up to $1,272 per run, with up to six runs per day. However because heliskiers come specifically for that activity, their contributions to the local economy can also be measured beyond the direct costs for heli-skiing. These visitors also contribute the cost of their lodging, meals, taxes and other miscellaneous purchases to the Haines economy during their stay.

The Skagway Borough currently has one summer helicopter tourism company, TEMSCO. Generally, flights are provided to Skagway visitors as side activities or as a "Shore Excursion Package" negotiated with cruise line companies. Currently, TEMSCO is authorized to provide up to 6,806 landings on both U.S. Forest Service (USFS) and BLM-managed lands. Of those landings, 1,900 are authorized on BLM-managed lands. This operator provides helicopter flightseeing and landings for some of the 1,305,133 tourists and visitors to the Municipality of Skagway (MOSB 2018).

Some of their Glacier Discovery Tours from Skagway to BLM and USFS lands are priced at $339 per person for an 80-minute tour, in aircraft capable of carrying up to six passengers (TEMSCO 2018). Potentially, one aircraft, making one glacier landing could earn $2,034 per aircraft, per trip. In terms of TEMSCO's historic summer usage of BLM-managed lands, TEMSCO has used between a high of 370 summer landings in 2013 to a low of 78 landings in 2016 (Healy 2018).

3.6.4 Borough Revenue

The Haines Borough levies a property tax, a sales tax, and a hotel bed tax. Total tax revenue in 2016 was $5,654,443, of which $2,828,963 was in sales tax, $2,825,480 was in property tax on $338 million in assessed property value, and $109,808 was in bed taxes (ADLWD 2018). The Skagway Borough also levies a property tax, a sales tax, and a hotel bed tax. Total tax revenue in 2016 was $9,009,720, of which $7,068,042 was in sales tax, $1,821,411 was in property tax on $331 million in assessed property value, and $120,267 was in bed taxes (ADLWD 2018). As an unincorporated community in an unorganized borough, Klukwan does not have taxation authority.

3.7 Environmental Justice

The study area for environmental justice is the Haines and Skagway boroughs as well as the Klukwan census-designated place (CDP). Klukwan is not within the Haines Borough, but is a separate CDP within the Hoonah-Angoon Census Area. Klukwan is a traditional Tlingit settlement and is home to the Chilkat Indian Village (CIV), a federally recognized tribe. Klukwan is represented by the Sealaska Corporation, an ANCSA regional corporation, and by Klukwan, Incorporated, and the village corporation.

The community in Klukwan, which includes members of CIV, has a minority population of just under 82 percent (USCB 2016). This includes individuals who identified themselves as American Indian or Native Alaskan (59 percent) and those who identified themselves as two or more races (23 percent). As identified in the Haines Highway EA and the Palmer Exploration Project EA, Klukwan meets the definition of a minority population (ADOT&PF 2015, BLM 2016). With a minority population of just over 19 percent (USCB 2016), the Haines Borough does not meet the definition of a minority population. Skagway Borough also does not meet that definition with a minority population of 13.2 percent (USCB 2018).

The Haines Highway EA did not identify either the Haines Borough or Klukwan CDP as meeting the definition of a low-income population based on U.S. Department of Health and Human Services poverty guidelines using median household income (ADOT&PF 2015). However, scoping and consultation letters received by the BLM indicated Klukwan is a low-income population (BLM 2016), so further clarification was sought through the use of the Economic Profile System (Headwaters Economics 2016), which the BLM Land Use Planning Handbook suggests using as a source for environmental justice data.

Those data showed that 10.6 percent of the individuals and 17.6 percent of the families in Klukwan are living below the poverty rate, compared to just 7.7 percent of the individuals and 3.8 percent of the families in Haines Borough (and compared to 10.1 percent of individuals and 7 percent of the families for the State of Alaska). Based on the higher rates of poverty in Klukwan, the BLM identified Klukwan as a low-income population.

Socioeconomics, traditional subsistence practices and use of subsistence resources is an important component of the Alaskan Native community of Klukwan. Historically, the Chilkat Tlingit have a long history of hunting the Upper Lynn Canal area for mountain goats, particularly for both their meat and hides (Emmons 1991). Their hides were important for the creation of traditional “Chilkat Blankets” which identified the wearers by their clan, moiety, and village during ceremonies.

During the years 1972 through 1986, the State of Alaska’s harvest data shows that the community of Klukwan harvested goats consistently each year (ADFG 1992). Currently, the residents of Klukwan, along with other residents of GMU 1D, have a Customary and Traditional Use Determination for Mountain Goats in Unit 1D. As such, effects on subsistence are tied to environmental justice considerations for Klukwan.

The Upper Chilkat River drainage, which includes Mount Raymond, Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, comprises the State of Alaska's most accessible and used mountain goat hunts in Unit 1D (ADFG 2018). Generally, ADFG recognizes that mountain goats taken in Unit 1D, unlike most goats taken from other hunt units in the state, are taken primarily for food rather than as trophies (Sell, 2014). State mountain goat registration hunts RG023 and RG026 had the largest number of permits issued, 128 of a total of 143 permits issued, and the most hunter success, 18 of a total of 21 mountain goats taken, in GMU 1D during 2017. Registration hunt RG023, which covers most of Takshanuk Mountain and the east side of the Chilkat River drainage, alone accounted for 102 permits issued and 12 mountain goats taken from those totals for 2017. However, community harvest data from the State of Alaska's Community Subsistence Information System (CSIS) does not include specific information about the harvests of mountain goats by the village of Klukwan (ADFG 2018).

Based on discussions during Government-to-Government meetings between the Chilkat Indian Village council and the BLM in April and July 2018, it appears that the community's harvest of mountain goats in GMU 1D has decreased in recent years. It was also reported that local weavers are relying on purchased commercial wool for their weaving rather than wool harvested from local goats. The village council expressed concerns that increased helicopter activity near their village and near Takshanuk Mountain would cause goats to jump from mountains while attempting to escape. The concern is that additional mortality or a reduction in goat reproduction would result in fewer goats for harvest in hunting areas near their village.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

The following planning assumptions are made for the purposes of impact analysis in this chapter. Additional assumptions specific to each resource are listed with their respective sections.

- Winter demand for permitted helicopter landings in the Planning Area is likely to increase over the life of the plan. Operators have already requested additional landings above the 300 winter landings currently permitted in the South Block of the Planning Area.
- Demand for permitted summer landings originating from Skagway can be expected to grow as tourism and cruise ship industry expands.
- Unless otherwise noted, the geographic scope for the cumulative effects analysis is defined as the State of Alaska GMU 1D. Although BLM-managed lands comprise only a portion of GMU 1D, similar resources, issues, and/or permitted uses (i.e., helicopter-supported tourism) occur throughout the Planning Area.
- The temporal scope for the cumulative effects analysis is defined on a resource-by-resource basis. In some cases, the temporal scope is defined by the anticipated duration of the direct and indirect effects. Elsewhere, the temporal scope is defined by anticipated use requests.

4.2 Recreation

Alternative E

How would backcountry users be affected by possible increases of permitted helicopter operations and landings?

Alternative E permits 2,700 landings annually, allowing for 300 winter landings. People without the specialized knowledge, skill, and equipment would have greater opportunity to take advantage of the services of commercial recreation providers on public lands, especially in the winter months.

Backcountry recreationists not utilizing some form of aviation to access the area would have minimal chances of encounter with other users since most permitted use (summer and Skagway based) is outside the timeframe (fall) and geographic area (Haines) where most casual use occurs.

How would decisions affect recreational users reliant upon helicopter support and operations?

Alternative E would permit 2,700 landings annually (2,400 summer 300 winter) allowing operators to maintain current business levels. This amount of permitted landings would not allow for expansion of current operators or the addition of new operators. Support to other business sectors in the communities of Skagway and Haines would remain stagnant with this amount of helicopter-supported tourism. A void would exist in meeting recreational demand for winter heli-ski opportunities.

How would special designations such as an ACEC, MCA, or SRMA affect overall land management in the area?

An ACEC-RNA would primarily have the same effects on recreation as retaining the MCA with a few exceptions. One major difference would be in potential interest of increased visitor use or research simply due to the ACEC-RNA designation. A second major distinction is the ACEC designation prevents all fixed wing access which would eliminate private use of planes in support of backcountry recreation activities.

The establishment of an ACEC-RNA would also prevent all commercial helicopter use, all UAS use, and placement of structures or establishment of ROW's within the ACEC-RNA boundary. While serving to protect the intrinsic research values of the ACEC-RNA, this management would negatively affect the ability to develop access routes or facilities (seasonal camps) in support of recreational activities.

This alternative classifies lands outside of the ACEC-RNA as an ERMA. Classifying lands as an ERMA as opposed to an SRMA will require fewer resources, less oversight, and less management from BLM personnel in the Planning Area. While an ERMA does not preclude recreation management, it would occur to a lesser degree and intensity than that of an SRMA. The ERMA would be managed to support and sustain principle recreation activities and associated qualities and conditions. The focus of the ERMA designation within the Planning Area would be on helicopter-supported recreation activities and backcountry use.

An ERMA designation could slow, though not prevent, future growth in tourism throughout the Planning Area. It would not be highlighted or focused upon in BLM print, digital, or social media. User created effects and disturbances (either on ground disturbances or on social conflicts) would take longer to identify and remedy simply because management and oversight is not as intense. An ERMA could protect the backcountry experiences to a greater degree than a SRMA, again because there would be less promotion of the area and therefore less use. An ERMA designation would also contribute to sustained economic viability of existing tourism-related businesses by not diverting or displacing current uses and users to different locales within the Planning Area.

Cumulative Impacts
Cumulatively, allowing operators up to 2,700 landings annually over the life of the plan would allow for little to no growth in local employment and business opportunities. This alternative does allow for winter helicopter/aviation-based tourism at a minimal level. Utilizing the 2:1 landing to visitor day ratio identified in chapter 2 this alternative would provide up to 150 more user days (from 300 winter landings) in the winter months in addition to the 2,600 user days currently permitted by the Haines Borough.

Alternative F
How would backcountry users be affected by possible increases of permitted helicopter operations and landings?
This alternative would authorize up to 6,000 helicopter landings annually, 3,000 winter and 3,000 summer. At these permit levels summer backcountry recreationists not using some form of aviation to access the area would have minimal chances of encounter with other users since most permitted use (summer Skagway-based) is outside the timeframe (fall) and geographic area (Haines) where most casual use occurs.

While most winter backcountry users are reliant on some form of aerial transportation to participate in recreation pursuits it can be expected that 3,000 landings would negatively affect (through sight or sound disturbance) a small percentage of the winter backcountry users. These impacts would however be limited in time, duration, and scope and could be analyzed through subsequent NEPA analysis and individual permits and operating stipulations.

How would decisions affect recreational users reliant upon helicopter support and operations?
This alternative provides an immediate way for current or future operators to cultivate and grow their business. In doing so, it will allow for increased opportunity for helicopter-supported recreation users to experience their public lands. While an allotment of 3,000 winter and 3,000 summer landings would become immediately available for use the maximum landing ceiling is lower than Alternative G.

At 3,000 winter landings, a minimal percentage of helicopter-supported users may become displaced as their traditional places of use or activities are utilized on a more frequent basis. These impacts would however be limited in time, duration, and scope and could be analyzed through subsequent NEPA analysis and individual permits and operating stipulations.

How would special designations such as an ACEC, MCA, or SRMA affect overall land management in the area?
This alternative classifies all lands within the Planning Area as an ERMA. An ERMA designation would have the same effects as the ERMA designation in Alternatives E and G.

After a period of five years, and upon lifting the MCA, 98,004 acres of new terrain would be available for use. This new terrain would allow permit holders to conduct operations over a wider geographical area, which could be beneficial when weather or snow conditions are not optimal in currently permitted areas.

Eliminating the MCA would have direct impacts to backcountry users due to potential helicopter landings and an increase in associated noise. These impacts would however be limited in time, duration, and scope and could be analyzed through subsequent NEPA analysis and individual permits and operating stipulations. Direct impacts to local residents from eliminating the MCA could potentially increase noise to local communities because of increased takeoff and landing to and from the MCA.

Cumulative Impacts
Cumulatively, allowing operators up to 6,000 landings annually over the life of the plan would allow for moderate room for growth in local employment and business opportunities. This alternative allows for winter helicopter operations up to 3,000 landings per winter season. Utilizing the 2:1 landing-to-visitor day ratio identified in chapter 2 this alternative would provide up to 1,500 more user days (from 3,000 winter landings) in the winter months in addition to the 2,600 user days currently permitted by the Haines Borough. Under this alternative, the increased use would generally be unmanaged since there is no phased growth strategy and the ERMA designation would lend itself to a more hands-off approach in balancing recreational uses.

Alternative G
How would backcountry users be affected by possible increases of permitted helicopter operations and landings?
Through adaptive management, this alternative allows for increased helicopter landings and operations if goat population objectives are met within buffered high use winter mountain goat habitat. The maximum number of landings to be permitted under this alternative would be 11,000 to be split equally (5,500) among winter and summer seasons. This alternative provides opportunities for increased landings within buffered high use winter mountain goat habitat (up to 1600 every three years) and could take up to 9 years to reach the maximum allowable annual landings.

Winter landings occurring outside of the 1,500-meter buffered high-use winter mountain goat habitat would not count against landing permit allocations, up to 5,500 total landings within the first year. While the impetus for this measured growth approach is to identify and mitigate or prevent effects to goats, it will also serve to identify and reduce conflicts on backcountry users. Slow growth will allow users to continue to enjoy their backcountry experiences while identifying concerns about possible future user conflicts to the BLM.

While most backcountry users are reliant on some form of aerial transportation to participate in recreation pursuits it can be expected that permitting levels at the higher end of the scale would negatively affect (through sight or sound) a small percentage of the average backcountry users. These impacts would however be limited in time, duration, and scope and could be analyzed through subsequent NEPA analysis and individual permits and operating stipulations.

How would decisions affect recreational users reliant upon helicopter support and operations?
This alternative provides a reliable avenue for current or future operators to cultivate and grow their business. In doing so, it will allow for increased opportunities for helicopter-supported recreation users to experience their public lands. While it is unlikely (based on previous industry demand, Table 7, Annual Historical Permitted Helicopter Use) that 11,000 landings would be permitted, the incremental permit periods (3 years) will allow ample time to ensure user experience is considered in future permitting decisions.

At the higher end of the winter landing scale, it can be expected that a segment of helicopter-supported users would become displaced as their traditional places of use or activities are utilized on a more frequent basis. These impacts would however be limited in time, duration, and scope and could be analyzed through subsequent NEPA analysis and individual permits and operating stipulations.

How would special designations such as an ACEC, MCA, or SRMA affect overall land management in the area?
This alternative designates 65,467 acres of land in the North Block as a SRMA. Designation of a SRMA would provide increased management activity within the area primarily related to goat hunting opportunity, wildlife viewing, and backcountry recreation. This designation would serve to protect or enhance the existing habitat while recognizing the importance of wildlife dependent recreation activities and backcountry recreation opportunities.

The designation eliminates helicopter supported SRPs, SRPs utilizing UAS (drones), and SRPs utilizing over snow travel within the SRMA. This designation results in an increase of 33,000 acres open to helicopter supported SRPs compared to Alternative A, 12,329 acres open to helicopter supported SRPs as compared to Alternative E, and a reduction of 65,467 acres open to helicopter supported SRPs as compared to Alternative F. Other SRPs would be considered if they support the objective statement of the SRMA.

The SRMA designation also specifically allows for temporary structures, such as hunting camps or trapping shelters, and provides for traditional means of access to include fixed wing landings. The BLM would also consider opportunities to improve or maintain existing trails, riverine access points, and other appropriate means of access in support of the SRMA management objective. OHV use within the SRMA would be limited to existing or designated routes. Cross country travel is allowed if sufficient snow cover (12-inches deep) or sufficient ground frost (6-inches or deeper) is present. Additionally the BLM would consider backcountry cabins and visitor facilities along the road system in support of SRMA objectives. These amenities would likely result in a slight increase to visitor use and associated impacts (litter, human waste, etc.) to public lands within the SRMA.

State of Alaska hunt number's RG023 and RG026 encompass portions of the proposed SRMA. In 2017, a combined total of 128 permits were issued within these two units (adfg.alaska.gov). The designation of a SRMA may lead to an increase in permits issued for these hunts, especially for people seeking a challenging backcountry hunt experience.

Cumulative Impacts
Taken cumulatively the increase in landings and designation of a SRMA will undoubtedly create growth in the recreation use of Haines area lands. While studies are hard to find demonstrating visitation increases on public-lands immediately after special designations are made, numerous studies demonstrate positive economic impacts, which would indicate an increase in visitation. One such study examining population, employment, personal income, and per-capita income growth found that these economic indicators generally grew following a designation of a national monument (National Monuments Update,

Headwaters Economics, 2017, P.1). While a SRMA designation is very different from a national monument designation, it is reasonable to expect an increase in use.

Cumulatively, allowing operators up to 11,000 landings annually over the life of the plan would allow for substantial room for growth in local employment and business opportunities. This alternative allows for winter helicopter operations up to 5,500 landings per winter season. Utilizing the 2:1 landing-to-visitor day ratio identified in chapter 2 this alternative would provide up to 2,750 more user days (from 5,500 winter landings) in the winter months in addition to the 2,600 user days currently permitted by the Haines Borough. This possible increased use will be managed and controlled through the adaptive management strategy and will afford enhanced recreational and economic opportunities to the surrounding communities.

4.3 Wildlife

Impacts common to all alternatives.
In addition to the planning assumptions listed at the beginning of this chapter, the following assumptions or declarations are made for the purpose of this analysis of impacts to wildlife:

- Aviation-supported activities elicit a greater response/impact to mountain goats than ground based human activities.
- Helicopter overflights elicit a greater response/impact to mountain goats than fixed-wing overflights (Bleich et al., 1994; National Park Service, 1994; Frid, 2003).
- Impacts to mountain goats resulting from helicopter noise and disturbance can occur at distances up to 1.5 km away (Hurley, 2004). For winter impacts analysis, known or projected drop-off and pick-up landing locations were buffered by 1.5 km. All high-use winter mountain goat habitat within the 1.5 km buffer was calculated for acreage totals and considered to be acres impacted.
- Landings occurring beyond habitat buffered by 1.5 km will have negligible impacts to mountain goats and mountain goat habitat.
- Areas previously reported as drop-off and pick-up landing locations will continue to be utilized. More authorized landings will result in increased utilization at previously reported landing sites.
- Demand to expand winter permitted recreational activities is greater in the South Block than North Block.
- Winter or winter season (December 1 to April 15) is referring to helicopter supported activities such as heli-skiing. Summer or summer season (May 1 to September 30) is referring to helicopter supported activities such as glacial tours and landings.
- Impacts to mountain goats during winter and summer seasons are different.

The following is a general overview of the current research on aviation-related impacts to mountain goats:

Analyzing impacts to mountain goats is challenging as most research has focused on behavioral responses resulting from stimuli, often noise, rather than direct effects to parameters such as animal physiology, productivity, and long-term survival. However, in all cases, impacts resulting from disturbance are thought to be additive, resulting in significant changes in behavior, use of habitat, and population dynamics (Foster and Rahs, 1983; Joslin, 1986; Richard and Côté, 2016). Multiple peer-reviewed publications have documented effects to mountain goats resulting from disturbance, none of which were described as beneficial (Foster and Rahs, 1983; Joslin, 1986; Côté, 1996; Goldstein et al., 2005; Côté et al., 2013; St-Louis et al., 2013; Richard and Côté, 2016; White and Gregovich, 2017).

Research in the western U.S. and Canada indicates that mountain goats and other alpine ungulates are sensitive to disturbance (Canfield et al., 1999; Frid, 2003; Wilson & Shackleton, 2001) particularly from helicopters (Foster & Rahs, 1983; Côté, 1996). Mountain goats may be especially vulnerable to disturbance associated with helicopter tour activities compared to other alpine ungulates because they have small home ranges, limited habitat use (Côté & Festa-Bianchet, 2003), and in summer, use habitats along flight paths and near glacier landing sites in the Planning Area. However, factors such as the type of activity, season, terrain, proximity to escape cover, and the population's past experience with aircraft overflights may influence their response to helicopter activity (Goldstein & et al., 2005; Wilson & Shackleton, 2001). In addition to the direct effects from helicopter flights, animals may also experience indirect effects that are more difficult to measure, such as increased physiological stress that may affect survival or reduce productivity (Foster & Rahs, 1983; Côté, 1996; MacArthur, Geist, & Johnson, 1982).

Through the adaptive management strategy, existing mitigation measures may be modified and new mitigation measures created as new mountain goat radio collar data and additional information informs and improves confidence in the tools (maps and/or models) used by decision makers. BLM and ADFG's on-going research in the Planning Area will continue to support and inform changes to the existing mitigation measures covered in Section 2.2, Management Common to All Alternatives.

Alternative E
A general overview of current research on aviation-related impacts to mountain goats can be seen under 4.3 *Impacts common to all alternatives.*

Impacts to mountain goats and their habitat

Winter
Under this alternative, up to 300 winter landings would be authorized in the South Block. This is the same number of winter landings authorized in the South Block since 2014. Utilizing post-use heli-skiing reports from recent activity, approximately 40 locations were projected as likely landing sites for analysis. At this authorization, it is expected that approximately 3,254 acres of high-use winter mountain goat habitat on BLM-managed lands within the Takinsha region would be affected, of which there is 6,043 acres. This acreage calculation for affected area may be an overestimation as the 2-dimensional buffer does not take into consideration topography or terrain features. The Takinsha region, regardless of land ownership, provides 42,129 total acres of high-use winter habitat.

It is not expected that all high-use winter mountain goat habitat would experience the same levels of intensity as nearly ¼ of the recently reported landings occurred in one geographic region while other terrain received 1 or 2 landings over the course of the permitted season. Assuming similar use of previously reported landing sites, much of the high-use habitat on BLM-managed lands within the Takinsha region would not be affected. At this current level of use since 2014, population level effects to mountain goats have not been identified.

Summer
Within the North Block, up to 2,400 summer landings would be authorized, which is the number of landings authorized since 2011. Since that time no more than 370, or approximately 15 percent of the authorized landings, have been utilized. It is assumed additional landings will be associated primarily with glacial landing tours. As these summer activities are largely point-to-point in nature, much of the impacts can be avoided or minimized by predetermined or predicted flight routes traveling to and from relatively few designated landing locations (sensu Hurley, 2004; White and Gregovich, 2018).

ACEC-RNA
Creation of an approximately 78,000 acre ACEC-RNA within a portion of the previously identified MCA would preclude permitted helicopter use and the noise and disturbance associated with such. This designation would provide a "control" for current and future research addressing the effects of aircraft disturbance to wildlife, particularly mountain goats. This designation would provide conservation benefits to approximately 22,820 acres of high-use winter mountain goat habitat within portions of the Takshanuk, Chilkat-Ferebee, Mount Raymond, and Hiteshitak regions. Approximately 7,801 acres of high-use winter mountain goat habitat within the Chilkoot-Ferebee region to the east of the ACEC-RNA, which was previously encompassed by the MCA, would be open to summer landings. Mountain goats and habitat in this area would be subjected to noise and disturbance previously not experienced. Conversely, approximately 1,278 acres of high-use habitat within the Takshanuk region previously not encompassed by the MCA would be incorporated into the ACEC-RNA.

Mountain goats and habitat in this area would not be subjected to the noise and disturbance associated with helicopter-supported recreation use. The area effectively operating as a "control", once the MCA is abolished and an ACEC-RNA established, will incorporate four geographic regions and be approximately 80 percent of the area previously managed as the MCA. All three of the different elevational wintering strategies (low, medium, high) exhibited by mountain goats within the Planning Area are represented within the ACEC-RNA, thus preserving research value.

By applying the ROPs and SRP terms and conditions found in 2.2, this alternative and the resulting permitted authorizations would have negligible effects on mountain goats and their habitat.

Cumulative Effects
Heli-skiing activities have been authorized throughout portions of the Haines Borough since 2006 (Personal Communication, Holly Smith, 08/15/2018). Most recently, 2,600 user days (approximately 5,200 landings) were authorized during the 2018 heli-skiing season. Incorporating borough approved areas within the Takinsha region and assuming all high-use winter mountain goat habitat within those areas (20,131 acres) is impacted by authorized activities, 23,385 acres or 56 percent of the Takinsha regions 42,129 acres total would be affected. It is not expected that the use of all high-use habitat would experience the same levels of intensity as terrain features, snow conditions, proximity to adjacent runs, and fuel burn all influence landing selections. In the event that specific ski runs with drop-off and pick-up landings are identified, a more accurate calculation of effects could be determined.

Alternative F

Impacts to mountain goats and their habitat

Winter
Under this alternative, up to 3,000 winter landings would be authorized in the Planning Area. It is expected that the majority of the winter landings will be realized in the South Block, however, there is interest to expand winter landing opportunities in the North Block as well. Relative to the currently permitted 300 landings, this alternative would authorize a 900 percent increase.

For analysis in the South Block, over 250 locations were projected as likely landings based on previous operator provided input for the 2012 DEIS and actual landing sites from more recent post use heli-skiing reports. If 3,000 landings were authorized in the South Block, 100 percent of the 6,043 acres of high-use winter mountain goat habitat would be affected on BLM-managed lands within the Takinsha region. Although all high-use habitat would be affected, it is not expected that all high-use habitat would experience the same levels of intensity as terrain features, snow conditions, proximity to adjacent runs, and fuel burn all influence landing selections. If fewer than 3,000 landings were authorized in the South Block, the acres of habitat affected would be commensurate with the number of landings authorized but would range between 3,254 acres (as described in Alternative E) and 6,043 acres (previously described). In the event that specific ski runs with identified drop-off and pick-up landing locations were identified, a more accurate calculation of effects could be determined.

Post-use reporting for the North Block does not exist as no authorized winter activities have occurred in this area. However, BLM recently received an application requesting 2,500 landings including desired landing locations during the winter months. These nearly 40 locations were projected and analyzed as likely landing sites. Utilizing these locations, and with flights based out of Skagway, it is expected that approximately 17,053 acres of high-use winter habitat would be affected on BLM-managed lands. This includes 7,982 acres in the Chilkoot-Ferebee and 9,071 acres in the Nourse regions. This is 24 percent and 31 percent of the mapped high-use winter habitat on BLM-managed lands within the two regions (Chilkoot-Ferebee = 33,254 acres, Nourse = 29,293 acres). The Chilkoot-Ferebee and Nourse region, regardless of land ownership, provide 70,729 and 46,598 total acres of high-use winter habitat, respectively.

Although post-use reporting for authorized winter activities does not exist for the North Block, it is expected that not all high-use habitat would experience use levels of the same intensity as terrain features, snow conditions, proximity to adjacent runs and fuel burn all influence landing selections. Based on operator provided input, landing locations in close proximity to Skagway with north/northeast aspect are expected to be utilized with more frequency than areas of further distance or less desirable aspect.

With a total of 3,000 landings to be authorized under this alternative, it is not likely that the majority would be realized in the North Block as most interest has been expressed for additional landings in the South Block. It is expected that the acres of habitat affected would be commensurate with the number of landings authorized as fewer landings would affect fewer acres of high-use habitat.

Summer

Under this alternative, up to 3,000 summer landings would be authorized in the Planning Area. Relative to the currently permitted 2,400 summer landings, this Alternative would authorize a 25 percent increase. It is assumed most landings would occur in the North Block as the Haines Borough does not currently permit any summer helicopter supported recreation activities out of Haines. These activities would be focused primarily on glacier landings. It is expected that locations previously permitted will continue to be utilized, and if utilized at full authorization, will experience higher frequencies of use. As these summer activities are largely point-to-point in nature, much of the impacts can be avoided or minimized by predetermined or predicted flight routes traveling to and from relatively few designated landing locations (sensu Hurley, 2004; White and Gregovich, 2018).

MCA
Five years after the signing of the ROD, the MCA designation would be abolished. At that time, approximately 29,465 acres of high-use winter mountain goat habitat would no longer be afforded conservation benefits. It is likely that helicopter supported recreation would be permitted within this previously undisturbed area. The ability to quantify long-term helicopter related impacts to wildlife would no longer exist within the Planning Area.

By applying the ROPs and SRP terms and conditions found in 2.2, impacts resulting from permitted authorization in this alternative would be mitigated. After five years, no area within the Planning Area would be precluded from the impacts and disturbances associated with permitted helicopter use.

Cumulative Effects
Cumulative effects for the South Block and the Takinsha region would be similar to that as described in Alternative E under *Cumulative Effects.* However, additional acres of high-use winter mountain goat habitat on BLM-managed lands are expected to be affected under this alternative. In total, 26,174 acres or 62 percent of the Takinsha regions 42,129-acre total would be affected.

With a substantial increase to the number of landings authorized on BLM-managed lands, potential exists for a redistribution of winter use within the Takinsha region as the majority of the lands open to authorized activities share a contiguous boundary with Borough-managed DNR lands. The flexibility for operators to utilize both BLM- and Borough-managed lands during the same ski run may make areas previously impracticable now highly desirable. In this case, intensity of use may decrease in some areas of Borough-managed land while increasing in others.

Incorporating Borough-approved areas within the Chilkoot-Ferebee region and assuming that all high-use winter mountain goat habitat within those areas (3,858 acres) is impacted, 11,840 acres or 17 percent of the Chilkoot-Ferebee regions 70,729-acre total would be affected.

Additionally, effects to high-use winter mountain goat habitat in the North Block resulting from BLM authorizations (9,616 acres) are expected within the Nourse region. However, no past, present or reasonably foreseeable actions are known for the winter season that could add to cumulative effects for this region. In the event that specific ski runs with identified drop-off and pick-up landing locations are identified, a more accurate calculation of habitat affects could be determined.

Alternative G

Impacts to mountain goats and their habitat

Winter
Under this alternative, up to 5,500 winter landings would be authorized in the Planning Area through incremental increases (See Table 2.2). 1600 winter landings within buffered high-use winter habitat would be authorized in year 1, and if all conditions are met and industry demand supports it, 5,500 landings would be reached by approximately year 9 in buffered high-use winter habitat. The 5,500 landings could be realized in year 1 or in any annual winter season as landings outside of buffered high-use habitat will not count toward the authorized number of landings (i.e., 1600 in year 1). Incremental increases within buffered high-use habitat after three year periods will allow lag time to quantify impacts to mountain goat populations should they exist at current authorized levels. Although more frequent incremental increases were considered, in coordination with ADFG, it was determined that a 3-year period of time was the most appropriate based on mountain goat biology and logistical constraints associated with wildlife surveys.

Relative to the currently permitted 300 winter landings, this alternative would authorize at a minimum 433 percent more landings in year 1 and up to 1,733 percent more landings at the maximum 5,500 authorization.

Analysis in the South Block is based on previous operator provided input for the 2012 Draft EIS and more recent post use heli-skiing reports with over 250 locations projected as likely landing sites at permitting levels near 6,000 landings. Based on this input, it is expected that 6,043 acres of high-use winter mountain goat habitat would be affected on BLM-managed lands within the Takinsha region. This would include all (100 percent) mapped high-use habitat on BLM-managed lands in the South Block. Similar to Alternative E, this acreage calculation may be an overestimation as the 2-dimensional buffer does not take into consideration topography or terrain features. Based on the number of authorized landings, it is expected that all high-use habitat would be affected. The Takinsha region, regardless of land ownership, provides 42,129 total acres of high-use winter habitat.

It is not expected that all high-use habitat would experience use levels of the same intensity as terrain features, snow conditions, proximity to adjacent runs and fuel burn all influence landing selections. Based on operator provided input and post-use heli-skiing reports for the South Block, terrain adjacent to or above Garrison, Bertha, and Tahkin Glaciers is frequently desired. Additionally, high-use habitat within the Takinsha region is modeled at low and medium elevations, thus providing some spatial separation from desirable high elevation heli-skiing activities.

It is expected that the majority of the winter landings will be realized in the South Block, however, there is interest to expand winter landing opportunities in the North Block as well. Analysis for the North Block was conducted similar to that previously described in Alternative F. It is assumed the previously described landing locations would continue to be desirable even at higher authorization levels. Under this assumption, with flights based out of Skagway, at a minimum 17,053 acres of high-use winter habitat would be affected on BLM-managed lands. This includes 7,982 acres in the Chilkoot-Ferebee and 9,071 acres in the Nourse regions. This is 24 percent and 31 percent of the mapped high-use winter habitat on BLM-managed lands within the two regions. With the potential to authorize up to 5,500 landing in the North Block, it is expected that more than the previously described 17,053 acres of high-use winter habitat would be affected. These effects would likely occur on terrain with higher elevations, northerly aspects and areas protected from wind. Although, as previously described, landing locations in close proximity to Skagway with north/northeast aspect are expected to be utilized with more frequency.

Summer

Under this alternative, up to 5,500 summer landings would be authorized in the Planning Area through incremental increases (See Table 2.2). 1,600 landings would be authorized in year 1 and must occur outside a 1500-meter buffer of known mountain goat kidding or Dall's sheep lambing areas. If all conditions are met and industry demand supports it, 5,500 landings would be reached by approximately year 9. Incremental increases after three year periods will allow lag time to quantify impacts to mountain goat populations should they exist at current authorized levels. It is assumed most landings would occur in the North Block and would be focused primarily on glacier landings. At the maximum authorization, this alternative would allow up to 5,500 landings, 113 percent more than currently authorized. It is expected locations previously permitted for summer recreation activities will continue to be utilized, and if at full authorization, will experience higher frequencies of use. As these summer activities are largely point-to-point in nature, much of the impacts can be avoided or minimized by predetermined or predicted flight routes traveling to and from relatively few designated landing locations (sensu Hurley, 2004; White and Gregovich, 2018).

SRMA
Creation of an approximately 65,467-acre Special Recreation Management Area (SRMA) would preclude permitted helicopter and UAS use and the associated disturbance within portions of the Takshanuk, Chilkat-Ferebee, Mount Raymond, and Hiteshitak regions. This designation would provide conservation benefits to approximately 17,900 acres of high-use winter mountain goat habitat within the previously described regions. Additionally, this designation effectively provides a "control" for current and future mountain goat research, and in particular, for those addressing the effects of helicopter disturbance to wildlife. All three of the different elevational wintering strategies (low, medium, high) exhibited by mountain goats within the Planning Area are represented within the SRMA, thus adding value. The designation would serve to protect or enhance the existing habitat while recognizing the importance of mountain goats, hunting opportunity, and access to the area. If as a result of SRMA management actions, populations of mountain goats increase within their respective regions; additional harvest opportunity may result as ADFG sets harvest quotas based on population estimates.

By applying the ROPs and SRP terms and conditions found in 2.2, impacts resulting from permitted authorization in this alternative would be mitigated.

Cumulative Effects
Cumulative effects for both the south and North Block would be similar to that as described in Alternative F under *Cumulative Effects.* However, additional acres of high-use winter mountain goat habitat would be affected under this alternative in the North Block, commensurate with the number of landings authorized. In the event that specific ski runs with identified drop-off and pick-up landing locations are identified, a more accurate calculation of habitat effects could be determined.

4.4 Acoustical Environment

The Supplemental Draft EIS incorporates tables to show the differences between the No Action Alternative and the supplemental alternatives for potential impact of noise. The Haines Borough has established flight corridors for winter flight operations that avoid residential areas and in such reduces potential impacts to residences. The following tables present the a comparison of helicopter flights generated by alternative and the overall percentage increase by alternative.

Table 4.1. Comparison of Helicopter Flights by Alternative (Summer Only)

Alternative	Authorized Landings Annually	Take-Off/Landings Per Day	Change in number of Take-Off/Landings	Operating Days	Flights per hour in 8-hrs period	Overall Average Increase
A	2700	20	0	120	2.50	0
E	2700	20	0	120	2.50	0
F	3000	26	6	120	3.25	11
G	5500	46	20	120	5.75	104

Table 4.2 Comparison of Helicopter Flights by Alternative (Winter Only)

Alternative	Authorized Landings Annually	Take-Off/Landings Per Day	Change in number of Take-Off/Landings	Operating Days	Flights per hour in 8-hrs period	Overall Average Percentage Increase
A	300	4	4	120	0.44	300
E	300	4	4	120	0.44	300
F	3000	26	22	120	3.25	900
G	5500	46	42	120	5.73	1733

Table 4.3 Helicopter Flights by Alternative (Adaptive Management Increases Winter)

Year	Authorized Landings Annually	Take-Off/Landings Per Day	Change in number of Take-Off/Landings	Operating Days	Flights per hour in 8-hrs period	Overall Average Percentage Increase[a]
0	300	4	0	120	0.5	0
1	1600	14	10	120	1.75	433
3	3200	28	14	120	3.5	100
6	4800	40	12	120	5.0	50
9	5500	46	6	120	5.75	15

a. Overall Average Percentage increase from pervious permitted level for each consecutive increase.

4.5 Lands with Wilderness Characteristics

How would the proposed land use planning decisions and implementation level decisions for Alternatives E, F, and G affect lands with wilderness characteristics?

Helicopter-supported recreation activities are temporary in nature, limited to specific seasons of operation, and only evident in a specific time and place of short duration. These activities have no effect on the landscape, result in no ground disturbing activities, and are neither pervasive nor omnipresent.

4.6 Climate and Environmental Change

For this analysis air quality emissions are calculated for helicopter flights and fixed-wing airplane flights for transportation to and from heli-skiing sites and summer flight-seeing tours from the Haines and Skagway areas. Tables showing emissions from both a gasoline- and diesel-powered passenger truck are provided for context and comparison of the data.

Emissions were estimated for EPA's "criteria pollutants" which are listed below.

CO – Carbon Monoxide
NO_2 – Nitrogen Dioxide
SO_2 – Sulfur Dioxide
PM_{10} –Inhalable particles, with diameters that are generally 10 micrometers and smaller
$PM_{2.5}$ - Fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller
O_3 – Ozone
Pb – Lead

They are called criteria pollutants because EPA sets National Ambient Air Quality Standards based on the criteria, which are characterizations of the latest scientific information regarding the pollutants effects on human health or welfare.

Ozone is a secondary pollutant not emitted directly to the air but is formed in the atmosphere by a combination of criteria and other pollutants along with sunlight. Estimating ozone concentrations is extremely complex and is well beyond the scope of this analysis.

For air quality, the only difference between the alternatives is the number of proposed helicopter flights each year.

The spreadsheets used to produce the emissions estimates in the following tables can be found in Appendix E.

Table 4.4 Gasoline Passenger Truck Emissions

Emissions	VOC	CO	NO2	SO2	PM10	PM2.5	CO2
lbs/day[1]	1.516	27.282	1.709	0.030	0.287	0.171	2755.793
lbs/yr	553.23	9,958.06	623.64	10.86	104.61	62.36	1,005,864
tons/yr	0.28	4.98	0.31	0.01	0.05	0.03	502.93

[1]Assumes 50 miles driven per day

Table 4.5 Diesel Passenger Truck Emissions

Emissions	VOC	CO	NO2	SO2	PM10	PM2.5	CO2
lb/day[1]	0.429	7.310	5.221	0.025	0.259	0.094	8818.537
lb/yr	156.51	2,668.2	1,905.5	9.25	94.55	34.20	3,218,766
tons/yr	0.08	1.33	0.95	0.00	0.05	0.02	1609.38

[1] Assumes 50 miles driven per day

Common to all alternatives
Fixed wing aircraft flights are estimated at 20 flights for each of the alternatives. Each flight was assumed to be 25 minutes in each direction. The emissions are presented in Table 4.4

Greenhouse gas (CO2) emissions were also estimated as they were not addressed previously for fixed wing aircraft.

Table 4.6 Criteria Pollutant Emissions from Fixed-Wing Aircraft*

	CO	VOC	NO2	SO2	PM110	PM2.5	CO2
TOTAL	0.552	0.005	0.022	0.045	0.030	0.006	6.320

*Based on 20-trips per year.

Helicopter Flights
Helicopter emissions were calculated using times and emission factors from the BLM Air Resources Toolkit, Technical Support Documents and information provided by the BLM Anchorage District Office.

Table 4.7 Alternative E Annual Helicopter Emissions

	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$
TOTAL	1.81	0.31	1.81	0.45	0.72	0.65

Table 4.8 Alternative F Annual Helicopter Emissions

	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$
TOTAL	4.03	0.69	4.03	1.00	1.60	1.44

Table 4.9 Alternative G Annual Helicopter Emissions

	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$
TOTAL	7.39	1.27	7.39	1.83	2.94	2.64

When comparing emissions produced by passenger trucks and aircraft over a years time it was assumed that one trip requires a 1-hour runtime and a 50-mile trip requires 1-hour to complete. BLM was then able to use this as the common denominator and determine the required multiplier to equalize the number of trips for annual emissions. When this is done it is determined that a helicopter will produce a small fraction of the emissions produced in comparison to passenger truck. Therefore, it is expected that air quality standards would not be exceeded by any of the proposed alternatives.

4.7 Special Status Species

Current numbers and population trends of special status species on BLM-managed lands in the Planning Area are unknown, and no specific management goals have been established for any of these species. It is not known whether Kittlitz's murrelets are present within the Planning Area, however current and proposed permitted activities are not expected to affect the species.

4.8 Vegetation Resources

Much of the Planning Area is ice and rock, with very little to no inventory of the vegetation resource. Impacts to vegetation resources would remain the same as they are now, under the current management scenario described in the Ring of Fire Analysis of the Management Situation (BLM 2008). Impacts to forestry resources would be the same for all alternatives considered in this analysis.

4.9 Cultural Resources

Effects common to all alternatives

Archaeological Resources on Glaciers and Semi-Permanent Ice Patches

Generally, given the large Planning Area with many potential landing spots and the low density of alpine archaeological resources, there is a low probability that summer helicopter operators will land near sites with cultural resources melting from them. The probability will be somewhat higher in areas close to prehistoric or historic use areas, such as the Chilkoot Trail or area encompassing the MCA near the Chilkat River Trail and goat hunting areas.

There are no anticipated effects from winter landings to archaeological resources on glacier or semi-permanent ice patches due to annual snow cover protecting those resources.

Cumulative Effects

Historic hunting opportunities, prior to Alaska statehood, were not encumbered by season or bag limits on mountain goats. Traditionally, the Chilkat and Chilkoot Tribes had more hunting opportunities in winter and spring to obtain the best goat wool, while goats are still present at the lowest and most accessible elevations due to snow cover. Currently, permitted goat hunts limit the season, number, and locations of goats taken in the area. As long as lands within the Planning Area remain State Selected, this alternative would not change any hunting opportunities under the current permitting system. If lands in the Planning Area become BLM unencumbered lands, a federal subsistence priority may open additional opportunities for local hunters to obtain goat meat and wool.

Mitigation
A stipulation will be added to commercial helicopter-supported SRPs requiring avoidance and reporting of any discovered cultural resources, including those melting from glaciers or ice patches.

Alternative A
Archaeological Resources on Glaciers and Semi-Permanent Ice Patches
Summer glacier landings have the potential to locate and directly impact through visitation or looting undiscovered cultural resources melting from recently deglaciated surfaces or melting semi-permanent ice patches, during high melt summers. However, the majority of undiscovered glacier or ice patch resources are likely to be located near known travel, trade, and hunting areas. Therefore limitations to helicopter-supported recreation within the MCA would place most potential effects farther away from traditional travel, trade, and hunting routes near the Chilkat or Klehini Rivers.

Traditional Cultural Access to Mountain Goats for Wool
Retaining the MCA would maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available for harvest.

Properties of Religious or Cultural Importance
With the MCA retained, properties of religious or cultural importance on Takshanuk Ridge would be protected during summer and winter, over much of the ridge except for six sections along the southern aspect of the ridge, which would be outside of the MCA. The special meaning or cultural importance of the area to local tribes would be adversely impacted by the presence of helicopters and skiers within these six sections.

Cumulative Effects
Because this alternative maintains the MCA, which is the most easily accessible goat habitat for local communities, it would also not alter the availability of goats through introducing helicopter noise disturbance during either the summer or winter.

Mitigation
Recommendation for the eastern Planning Area, outside of the MCA, to receive a priority for proactive surveys of alpine ice patches and glacier margins in the vicinity of current or proposed summer helicopter-supported recreation.

Alternative E
Archaeological Resources on Glaciers and Semi-Permanent Ice Patches
Summer glacier landings have the potential to locate and directly impact, through visitation or looting, undiscovered cultural resources melting from recently deglaciated surfaces or melting semi-permanent ice patches. However, the majority of undiscovered glacier or ice patch resources are likely to be located near known travel, trade, and hunting areas. Therefore limitations to helicopter-supported recreation within the ACEC would place most potential effects farther away from traditional travel, trade, and hunting routes near the Chilkat or Klehini Rivers.

Traditional Cultural Access to Mountain Goats for Wool
Creating an ACEC encompassing the Upper Chilkat River drainage, plus Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains as well as Mount Raymond would maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available to harvest.

Properties of Religious or Cultural Importance
Properties of religious or cultural importance on Takshanuk Ridge would be protected from potential winter or summer impacts from helicopter-supported recreation by restricting landings with an ACEC, which includes Takshanuk Ridge.

Cumulative Effects
Because this alternative would create an ACEC surrounding the most accessible goat hunting areas for local tribes, it would not alter the availability of goats through introducing helicopter noise disturbance during either the summer or winter.

Mitigation
Recommendation for the eastern Planning Area, outside of the ACEC, to receive a priority for proactive surveys of alpine ice patches and glacier margins in the vicinity of current or proposed summer helicopter-supported recreation.

Alternative F
Archaeological Resources on Glaciers and Semi-Permanent Ice Patches
Summer glacier landings have the potential to locate and directly impact through visitation or looting undiscovered cultural resources melting from recently deglaciated surfaces or melting semi-permanent ice patches, during high melt summers. Since this alternative increases the areas available for summer helicopter-supported recreation within the MCA after five years, including culturally significant locations on Takshanuk Mountain, it may increase impacts to undiscovered glacial or ice patch cultural resources.

Traditional Cultural Access to Mountain Goats for Wool
Opening the MCA to winter helicopter-supported recreation after five years during mountain goat wintering season could negatively impact goats in the most accessible and hunted parts of Game Management Unit 1D under hunts RG023 and RG026. This would result in the loss of available goats hunted for their meat and hides for future residents including Chilkat Tribal members.

Properties of Religious or Cultural Importance
Opening the MCA after five years to summer and winter landings of helicopters could increase summer and winter landings or overflights along Takshanuk Ridge, which has traditional religious or cultural importance for the Chilkat Tribe. The special meaning or cultural importance of the area to local tribes would be adversely impacted by the presence of helicopters and skiers along Takshanuk Ridge, which overlooks the Chilkat Indian Village at Klukwan.

Cumulative Effects
Because this alternative would open the MCA to helicopter-supported recreation after five years, it has the potential to impact goat populations from expanded helicopter-supported recreation within the Chilkat River drainage. If the population of mountain goats previously protected by the MCA were adversely affected, it could limit goat-hunting opportunities because these are the most accessible goats within the Planning Area.

Mitigation
Recommendation for cultural resource inventories in areas proposed for summer helicopter landings within the former MCA, prior to approving additional landing areas. The Planning Area should receive a priority for proactive surveys of alpine ice patches and glacier margins in the five years prior to opening the area to summer helicopter-supported recreation.

Alternative G

Archaeological Resources on Glaciers and Semi-Permanent Ice Patches

Summer glacier landings have the potential to locate and directly impact, through visitation or looting, undiscovered cultural resources melting from recently deglaciated surfaces or melting semi-permanent ice patches. However, the majority of undiscovered glacier or ice patch resources are likely to be located near known travel, trade, and hunting areas. Therefore limitations to helicopter-supported recreation within the SRMA would place most potential effects farther away from traditional travel, trade, and hunting routes near the Chilkat or Klehini Rivers.

Traditional Cultural Access to Mountain Goats for Wool

Creating a SRMA, with restrictions on helicopters, encompassing the Upper Chilkat River drainage, plus Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains as well as Mount Raymond would maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available to harvest.

Properties of Religious or Cultural Importance

Properties of religious or cultural importance on Takshanuk Ridge would be protected from potential winter or summer impacts from helicopter-supported recreation by restricting landings with a SRMA, which includes the Takshanuk Ridge.

Cumulative

Because this alternative would create a SRMA surrounding the most accessible goat hunting areas for local tribes, it would not alter the availability of goats through introducing helicopter noise disturbance during either the summer or winter.

Mitigation

Recommendation for the eastern Planning Area, outside of the SRMA, to receive a priority for proactive surveys of alpine ice patches and glacier margins in the vicinity of current or proposed summer helicopter-supported recreation.

4.10 Socio-Economics

All alternatives analyzed in this section are analyzed with two presumptions in mind about the potential revenue from winter and summer helicopter-supported recreation. The first is that a single winter heliski run consists of two landings, a drop-off and pick-up, and on average costs $212 per client. Since the aircraft can carry up to six passengers, a single aircraft could be earning up to $1,272 per run, with up to six runs per day. It also presumes that on average a summer helicopter tourism operator charges $339 per person for an 80-minute tour, in aircraft capable of carrying up to six passengers. Potentially, one aircraft, making one glacier landing could earn $2,034 per aircraft per trip
(refer to Chapter 3, section 3.11).

Alternative A

This alternative would authorize only summer landings at levels similar to current authorizations. Because the Haines Borough does not authorize summer helicopter recreation, Alternative A would eliminate any current economic benefits for the Haines Borough from the 300 winter landings currently authorized. It would also keep income related to summer helicopter tourism similar to current levels for the Skagway Borough.

Alternative E
This alternative would authorize up to 300 winter landings and 2,400 summer landings in the Planning Area for helicopter-supported recreation. If summer landings, which currently originate only from Skagway, remain similar to past use of between a high of 370 landings in 2013 to a low of 78 landings in 2016, then current operators would not exceed their currently allocated 2,400 summer landings. This would not appreciably change the income related to summer helicopter tourism for the Skagway Borough, unless unforeseen market or environmental conditions changed, enough to make BLM-managed lands more attractive for summer helicopter tourism.

If only 300 winter landings were allocated for winter helicopter-supported recreation in either Haines or Skagway Boroughs, it would keep current revenue levels for the helicopter-supported recreation industry. That revenue would be approximately $1,272 per run directly to the winter helicopter-supported recreation industry. If all landings were used on BLM-managed lands then this alternative could continue to bring in up to $191,000 per year directly to the industry. It would also bring an unknown amount of added revenue to businesses, like lodges, hotels, restaurants, bars, sporting goods stores and markets that support winter tourism in either community.

Alternative F
This alternative would authorize up to 6,000 landings in the Planning Area, which would be split evenly for both summer and winter helicopter-supported recreation landings. If all 3,000 allocated summer landings were used in the Skagway Borough, then this alternative could bring in about $2,034 per glacier landing to industry. This would translate to approximately $6,102,000 in direct revenue to the helicopter tourism industry per year. However, if summer landings, which currently originate only from Skagway, remain similar to past use of between a high of 370 landings in 2013 to a low of 78 landings in 2016, then current operators would not reach their allocated 3,000 summer landings.

This would not appreciably change the income related to summer helicopter tourism for the Skagway Borough, unless unforeseen market or environmental conditions changed, enough to make BLM-managed lands more attractive for summer helicopter tourism.

If the remaining 3,000 winter landings were allocated for winter helicopter-supported recreation in either Haines or Skagway Boroughs, it could potentially add approximately $1,272 per run directly to the winter helicopter-supported recreation industry. If all landings were used on BLM-managed lands then this alternative could bring in directly up to $1,908,000 per year to the industry.

It would also bring an unknown amount of added revenue to businesses, like lodges, hotels, restaurants, bars, sporting goods stores and markets that support winter tourism in either community.

Alternative G
This alternative would initially authorize 1600 winter landings in high use buffered goat habitat and 1600 summer landings, then incrementally increase those numbers of landings up to 5,500 winter landings in high use buffered goat habitat and 5,500 summer landings maximum in the Planning Area for helicopter-supported recreation. Generally, this alternative could allow industry to gradually grow their logistics structure and capabilities into higher profits rather than offering initially high maximum numbers of landings, which could strain industry’s access to rental aircraft, landing facilities, fuel, spare parts as well as pilots and other qualified employees.

If summer landings, which currently originate only from Skagway, were initially capped at 1600 landings for the first year and all allocated landings were used, then this alternative could bring in about $2,034 per glacier landing. This would mean that 1600 landings could bring in up to $1,627,000 to the summer helicopter tourism industry each year. If the prices of helicopter tours remained the same over the life of this plan, which is unlikely due to inflation alone, then every three years of a permit cycle, revenues for the industry would increase by approximately $1,627,000. This would increase up to a maximum of 5,500 summer landings netting a revenue of approximately $5,593,000 annually in today's dollars. However, if trends seen in past use continue, which varied between a high of 370 landings in 2013 to a low of 78 landings in 2016, then current operators would not likely exceed the first year allocation of 1600 landings. This would not appreciably change the income related to summer helicopter tourism for the Skagway Borough, unless unforeseen market or environmental conditions changed, enough to make BLM-managed lands more attractive for summer helicopter tourism.

If 1600 winter landings in high use buffered goat habitat were allocated for winter helicopter-supported recreation in either the Haines or Skagway Boroughs, it would increase revenue levels for the helicopter-supported recreation industry from current levels. That income would be approximately $1,272 per run, which includes both a drop-off and pick-up landing, directly to the winter helicopter-supported recreation industry. If all landings were used on BLM-managed lands then this alternative could bring in up to $1,627,000 of revenue per year directly to the industry. If the prices of helicopter skiing remained the same over the life of this plan, which is unlikely due to inflation alone, then every three years of a permit cycle would increase revenues for the industry by approximately $1,627,000. This would increase up to a maximum of 5,500 winter landings netting a potential revenue of approximately $3,498,000 annually in today's dollars. It would also bring an unknown amount of added revenue to businesses, like lodges, hotels, restaurants, bars, sporting goods stores and markets that support winter tourism in either community. Additionally, since this alternative allows for unlimited landings outside of buffered mountain goat high use winter habitat, there could be an increase in the use of those areas for heli-skiing. However, there are currently no estimates for that potential use and its economic benefits cannot be accurately calculated beyond an increase up to the maximum total cap on landings of 5,500. If landings increased up to the maximum, which is unlikely, they would net revenue of approximately $3,498,000 annually in today's dollars.

4.11 Environmental Justice

Common to all alternatives

Given that only two percent to four percent of the jobs in Klukwan village between 2012 and 2016 were related to the tourism industry, it is unlikely that any expansion of helicopter-supported recreation during the summer or winter would lead to additional economic benefits for the village.

Alternative A

Retaining the MCA would maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available for harvest by Klukwan Village residents.

Alternative E

Creating an ACEC encompassing the Upper Chilkat River drainage, plus Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains as well as Mount Raymond could maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available to harvest for Klukwan Village.

Alternative F
Opening the MCA to winter helicopter-supported recreation after five years during mountain goat wintering season could negatively affect goats in the most accessible and hunted parts of Game Management Unit 1D under hunts RG023 and RG026. This could result in the loss of available goats hunted for their meat and hides for future residents including Chilkat Tribal members.

Alternative G
Creating a SRMA, with restrictions on helicopters, encompassing the Upper Chilkat River drainage, plus Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains as well as Mount Raymond could maintain the availability of mountain goats and their wool at similar or higher levels to current populations, resulting in similar numbers of goats available to harvest for Klukwan Village.

4.12 Unavoidable Adverse Impacts

Section 102(c)(i) of NEPA requires the disclosure of any unavoidable adverse impacts that may occur as a result of the project, which are impacts that are not able to be fully mitigated for, or for which no mitigation measures exist. These unavoidable adverse impacts vary between the proposed alternatives and take into consideration protection of resources while allowing for differing intensities of multiple uses.

The main determining factor of unavoidable adverse impacts is the degree to which wildlife disturbance activities are allowed under each alternative. These actions may include surface disturbance that causes soil erosion; removes and alters vegetation communities; or that removes, alters, or fragments wildlife habitat or removes wildlife from winter habitat.

The alternatives analyzed in this Supplemental Draft EIS would not authorize surface-disturbing activities or authorize alterations to vegetation communities. The use of aircraft may temporarily contribute to fugitive dust emissions during operations and may temporarily displace wildlife. These can be mitigated through time and duration of operations and therefore, should not cause unavoidable adverse impacts.

4.13 Irreversible and Irretrievable Commitment of Resources

Section 102(2)(c)(v) of NEPA requires that an EIS include a discussion of the irreversible and irretrievable commitments of resources that would be involved in the proposed action should the project be implemented.

Irreversible commitments of resources are those that cause either direct or indirect use of natural resources such that the resources cannot be restored or returned to their original condition, such as species extinction, loss of cultural or paleontological resources, permanent alteration of a watercourse, or exhausting the supply of a mineral resource within an area. There are no irreversible or irretrievable commitments of resources in this plan amendment.

4.14 Relationship of Short-Term Uses of the Environment to Long-Term Productivity

Section 102 (c)(iv) of NEPA requires an analysis of the relationship between local short-term uses of the human environment and long-term productivity of resources. Short-term uses result in impacts that are anticipated to occur while the proposed alternative, use, or activity is being implemented, usually within a 5-year period. Long-term impacts relate to effects that are anticipated after the first 5-years but would not exceed the timeframe for the life of the RMP.

Short-term impacts would be those impacts that revert to pre-project conditions within a few years, whereas long-term impacts would take longer to revert or would cause permanent change. Impacts from short-term uses to long-term productivity would vary by alternative. More long-term impacts would be anticipated from alternatives that emphasize more uses.

Many uses of public lands, such as grazing, mineral development, ROWs, and recreation, have actions that could exceed 5-years. Short-term uses could include these same actions, but on a limited basis, such as mining exploration or development that lasts for 5-years or less. Proposed activities within this plan may have both short-term and long-term impacts. Some short-term impacts would be related to noise from helicopters or aircraft disturbing recreationalists and wildlife for short durations of time when passing through an area. Long-term impacts would be related to wildlife disturbance that cause mortality or disruption in reproduction cycles.

Management actions to prevent temporary or short-term disturbances through approved operating plans will reduce noise impacts from overflights and wildlife disturbance through avoidance. Long-term impacts would be reduced or avoided through monitoring and adaptive management.

5.0 CONSULTATION AND COORDINATION

5.1 Federal and State Government Agencies

See paragraph 2.1 of the 2012 Draft (BLM 2012).

5.2 Government-to-Government Consultation

The BLM's Glennallen Field Office has had the following Government-to-Government meetings with Federally Recognized Tribes and consulted with the Sealaska Corporation as an ANCSA Regional Corporation about this plan and its previous draft:

March 29, 2018	Yakutat Tlingit Tribe in Yakutat, Alaska
April 2, 2018	Sealaska Corporation in Juneau, Alaska
April 2, 2018	Douglas Indian Association in Juneau, Alaska
April 3, 2018	Chilkat Indian Village at Klukwan, Alaska
April 4, 2018	Chilkoot Indian Association in Haines, Alaska
April 5, 2018	Skagway Traditional Council in Skagway, Alaska
July 13, 2018	Chilkat Indian Village in Klukwan, Alaska

The BLM has also received two written comments from the Chilkat Indian Village in response to the 2012 DEIS review and the 2018 supplemental public outreach period.

5.3 Adjacent Landowners and Land Managers

A letter was sent to the following landowners and managers about the planning process shortly after the news release stating the process was starting again was published.

- Glacier Bay National Park and Wilderness
- Haines Borough
- Klondike Gold Rush National Historical Park
- Klukwan, Inc.
- Municipality of Skagway
- State of Alaska
- Tongass National Forest

Public announcements about upcoming public outreach meetings were made through advertisements in the local newspapers in Haines, Skagway, and Juneau for two weeks prior to all three meetings.

5.4 Regional and Village Native Corporations

The Regional Native Corporation, Sealaska Corporation, was informed by mail of the restart of the SDEIS project and public outreach and comment period shortly after the news release was published in the local papers. Sealaska Corporation was also consulted during a face-to-face meeting in Juneau on April 2, 2018. The Village Native Corporation; Klukwan, Inc. was notified by mail that the Ring of Fire Amendment is taking place and asked to comment.

5.5 Community Participation

In addition to their participation in the scheduled scoping meetings, RMP Amendment team members have continued communicating with community members from Haines and Skagway. Individuals from these and other communities within the Planning Area have provided additional data needed for planning purposes. Chilkat Indian Village Council has provided additional data on Traditional Properties of

Religious and Cultural Importance as well as subsistence uses. Opportunities for public participation were provided at the scoping meetings, public outreach meetings and during public comment periods, and will continue to be afforded throughout the planning process.

5.6 Resource Advisory Council

The BLM Alaska Resource Advisory Council (RAC), which advises the BLM Alaska State Director and may make recommendations to the BLM Anchorage District managers, provides a broad spectrum of input from various interests. The RAC has been informed of the status of this planning effort since February 2009; most recently, the RAC was provided with a status update at their August 14-15, 2018 meeting.

5.7 Media

Use of local media is essential in providing adequate public notice for the varying stages of the planning process. Radio and print media of local and statewide circulation were used to disseminate information concerning the scoping meeting schedule. The BLM has utilized the following radio stations and newspapers for announcements of public scoping meetings:

- KHNS Public Radio (Haines, Klukwan, and Skagway)
- KTOO Public Radio (Juneau)
- The *Juneau Empire* newspaper
- The *Skagway News* newspaper
- The *Chilkat Valley News* (Haines, Klukwan) newspaper
- The Associated Press (Anchorage), news agency

5.8 Cooperating Agencies

Haines Borough
Skagway Borough

5.9 List of Preparers

The GFO formed an interdisciplinary team of resource specialists for this planning effort in 2018. The following resource specialists were involved in the analysis of comments received, alternatives development, and impact analysis.

Bruce Loranger	Planning and Environmental Coordinator
Jesse Hankins	Wildlife Biologist
John Jangala	Archaeologist
Denton Hamby	Recreation Planner
Cory Larson	Recreation Planner
Brenda Becker	Realty Specialist
Michael Lindsay	GIS Specialist
Paxton McClurg	GIS Specialist
Marnie Graham	Glennallen Field Manager

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7.0 MAPS

Haines Planning Area- Overview

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



North & South Blocks
Bureau of Land Management
State of
Alaska Native Allotment
Alaska Native Corporation

Forest Service
Local Government
National Park Service
Private
Water

Heliports
Road/Highway
▲ Summit
\+ Low point

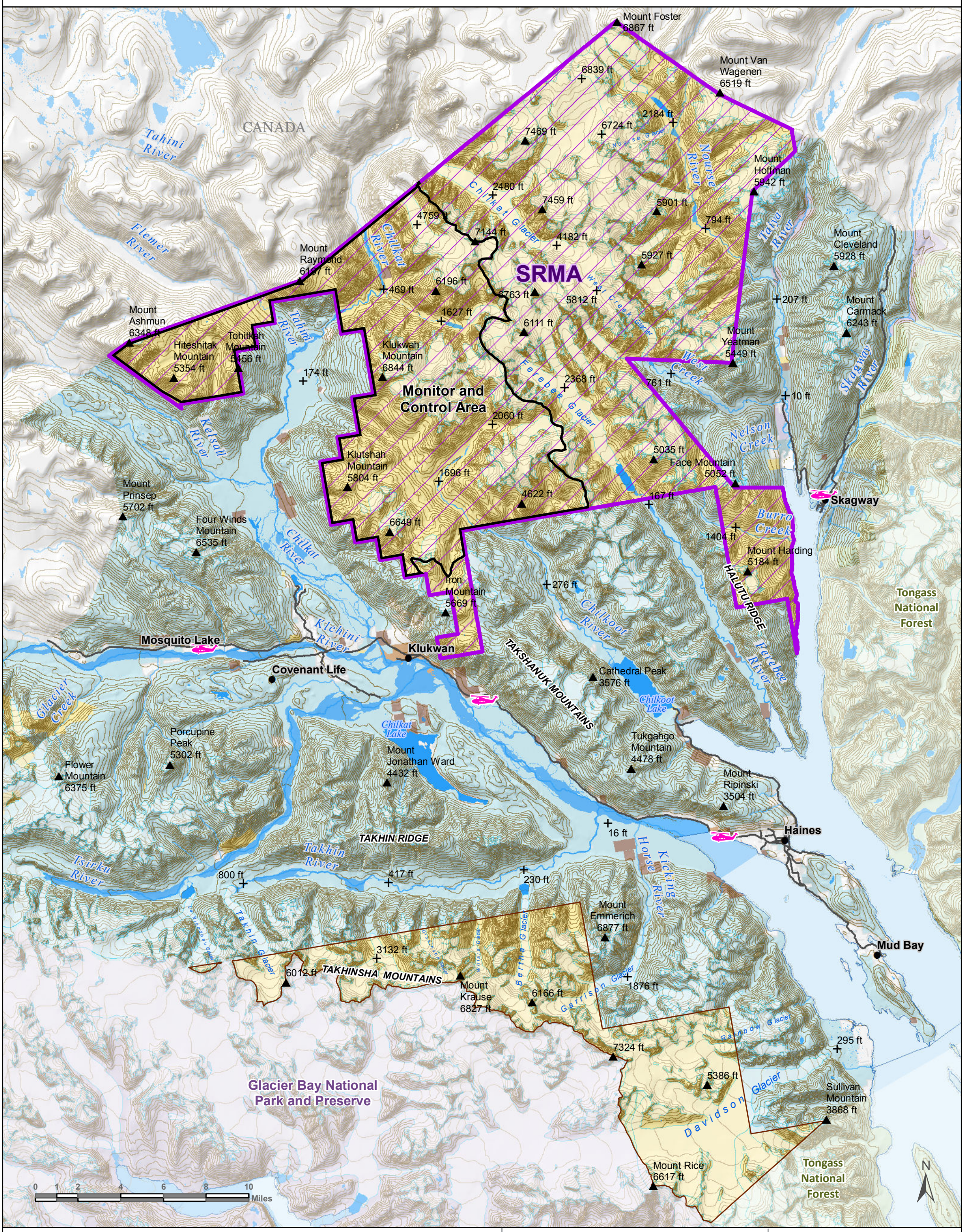
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Map 1

Haines Planning Area- Alternative A

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



- Monitor & Control Area
- SRMA
- Bureau of Land Management
- State of
- Alaska Native
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- South Block
- Heliports
- Road/Highway
- Mountain Summit
- Lower Elevation

Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.The information displayed on this map should be used for graphic display only. For official land status information, refer to Cadastral Survey plats, Master Title Plats, and land status case-files.



Map 2

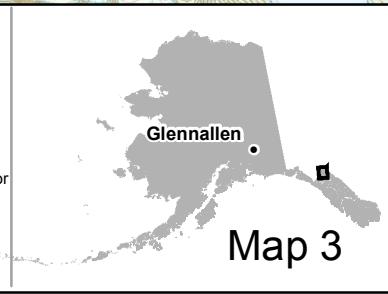
Haines Planning Area- Alternative E

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



- Proposed ERMA
- Proposed ACEC
- Bureau of Land Management
- State of Alaska
- Alaska Native Allotment
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- Heliports
- Road/Highway
- Mountain Summit
- Lower Elevation

Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.The information displayed on this map should be used for graphic display only. For official land status information, refer to Cadastral Survey plats, Master Title Plats, and land status case-files.



Map 3

Haines Planning Area- Alternative F

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



Proposed ERMA
5 Year Monitor & Control Area
Bureau of Land Management
State of Alaska
Alaska Native Allotment
Alaska Native Corporation
Forest Service
Local Government
National Park Service
Private
Water
Heliports
Road/Highway
▲ Mountain Summit
\+ Lower Elevation

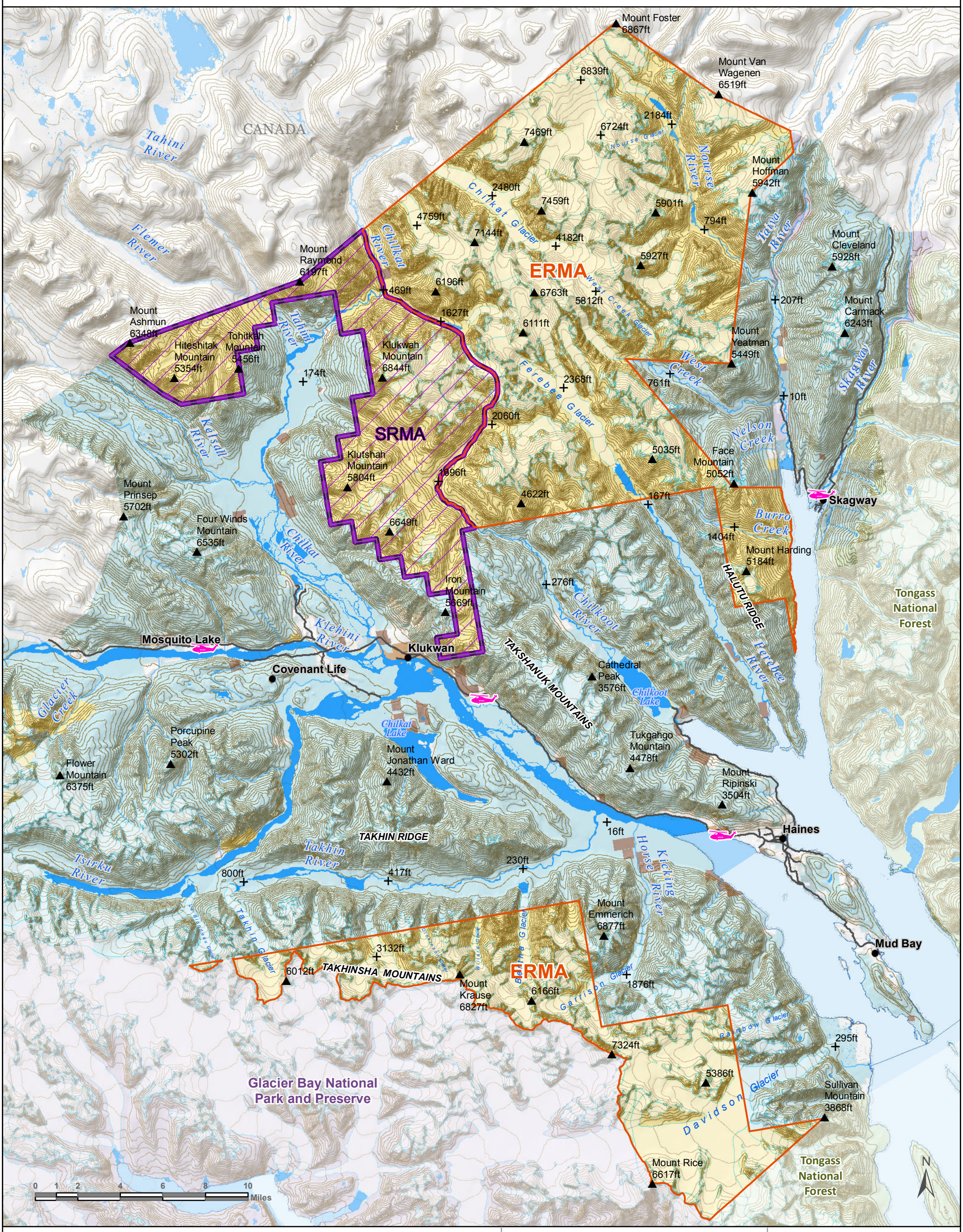
Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.The information displayed on this map should be used for graphic display only. For official land status information, refer to Cadastral Survey plats, Master Title Plats, and land status case-files.



Map 4

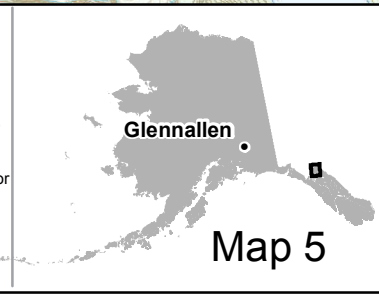
Haines Planning Area- Alternative G

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



Proposed ERMA
Proposed SRMA
Bureau of Land Management
State of
Alaska Native
Alaska Native Corporation
Forest Service
Local Government
National Park Service
Private
Water
Heliports
Road/Highway
▲ Mountain Summit
\+ Lower Elevation

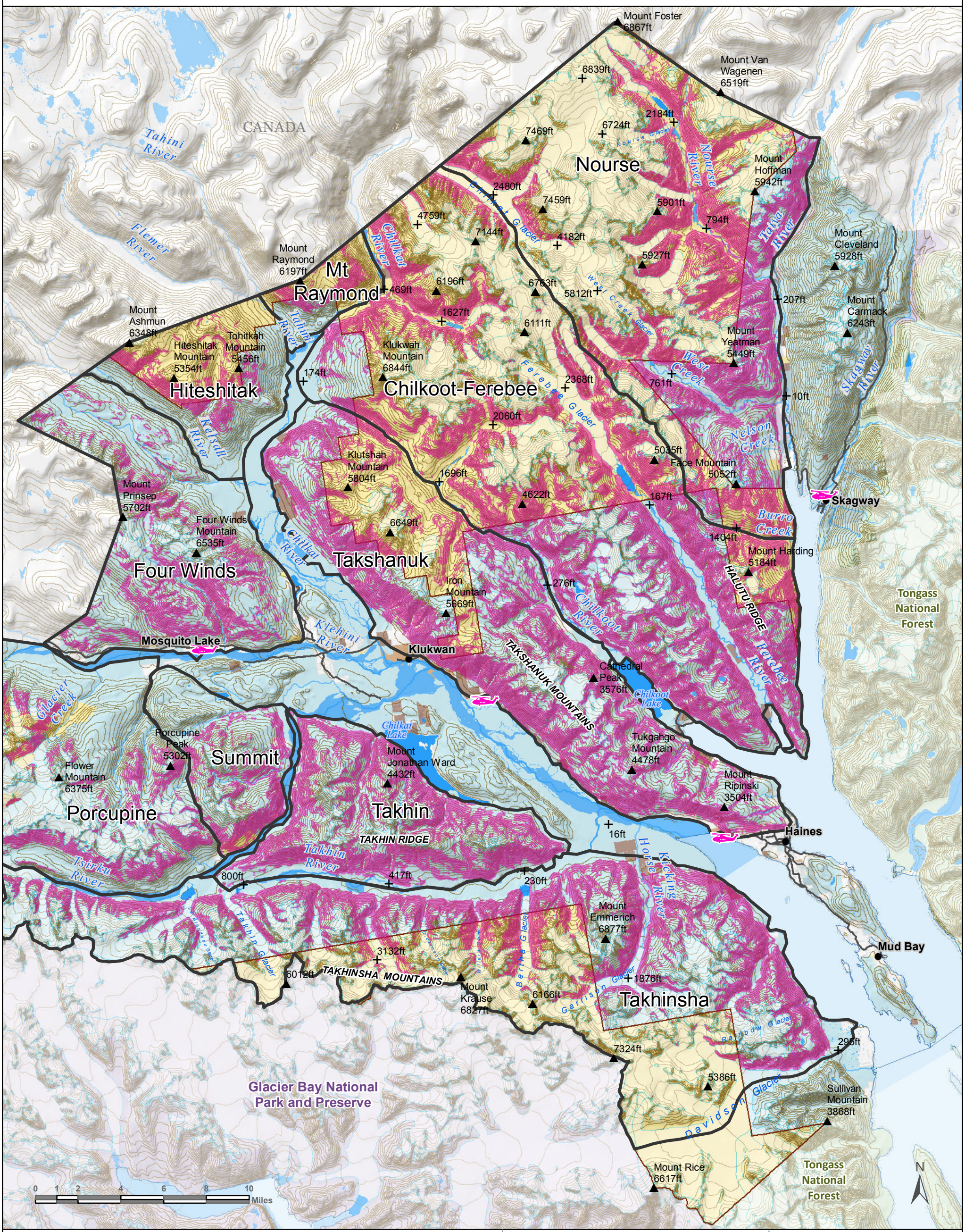
Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.The information displayed on this map should be used for graphic display only. For official land status information, refer to Cadastral Survey plats, Master Title Plats, and land status case-files.



Map 5

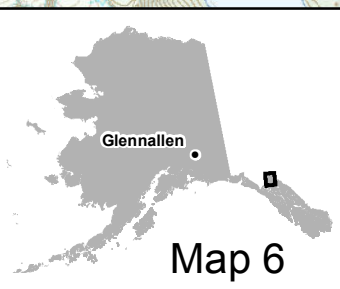
Haines Planning Area- Mountain Goat Winter Habitat by Geographic Region/Population

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | GLENNALLEN FIELD OFFICE



- Mountain Goat Study Regions
- Mountain Goat Winter Habitat
- Bureau of Land Management
- State of Alaska
- Alaska Native Allotment
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- North & South Blocks
- Heliports
- Road/Highway
- ▲ Mountain Summit
- \+ Lower Elevation

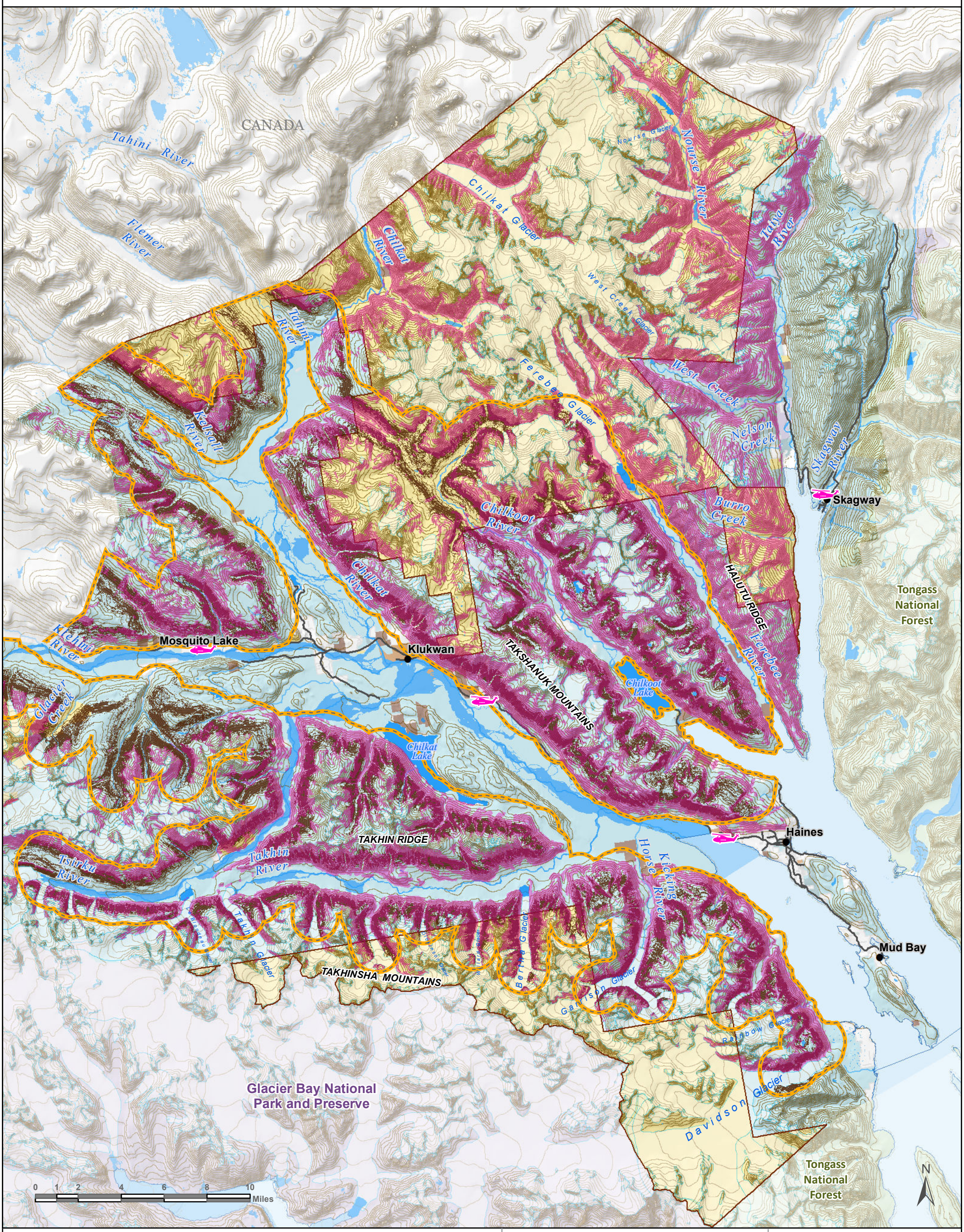
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Map 6

Haines Planning Area- Mountain Goat and Brown Bear Winter Habitat

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- Brown Bear Study Extent
- Mtn Goat/Brown Bear Habitat Overlap
- Mountain Goat Winter Habitat
- Brown bear den
- Bureau of Land Management
- State of Alaska
- Alaska Native
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- North & South Blocks
- Heliports
- Road/Highway

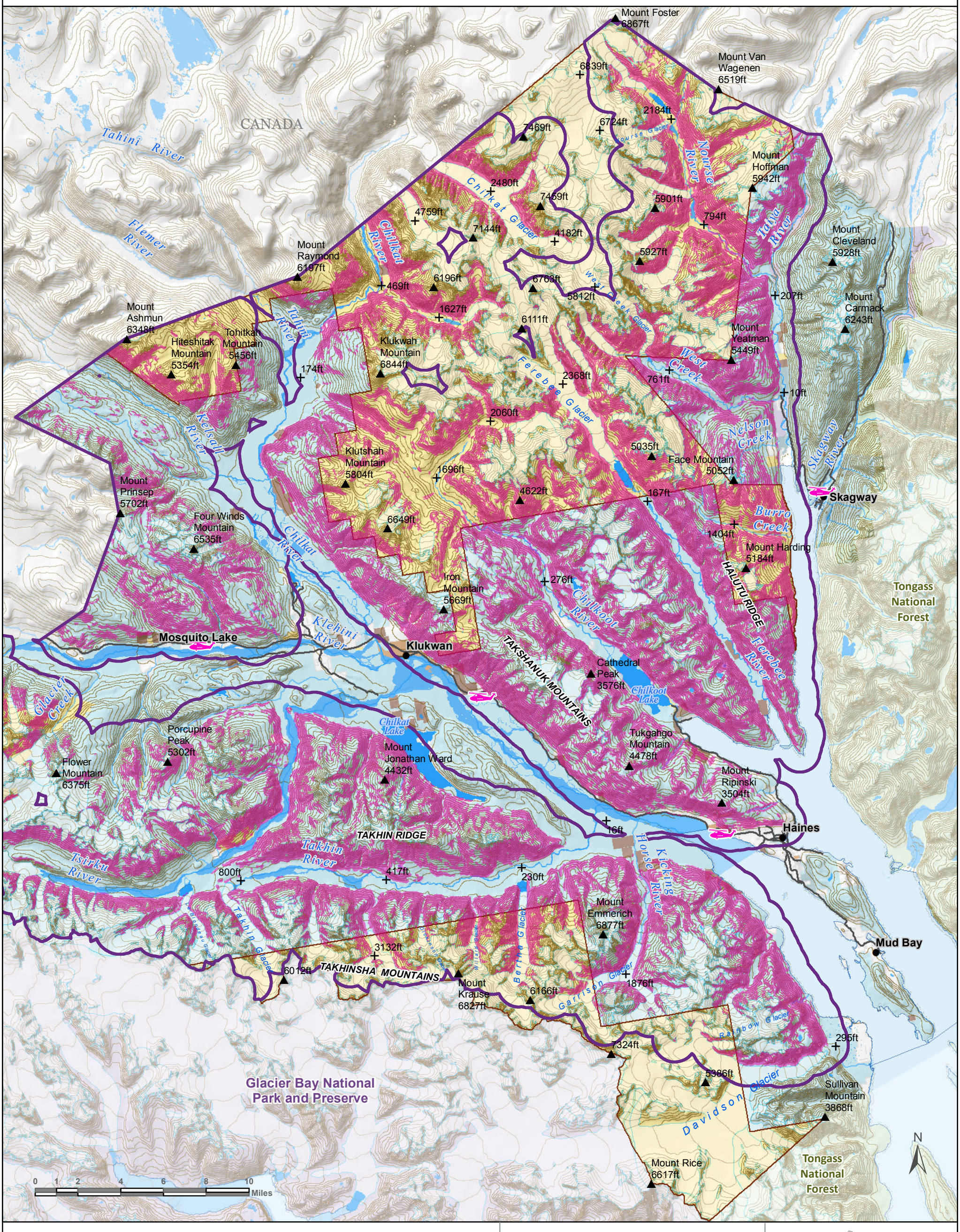
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Map 8

Haines Planning Area- Mountain Goat Winter Habitat, plus 1500 meter Buffer Zone

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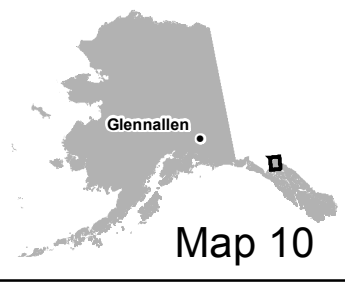
Haines Planning Area- Historic Trade Routes

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Historic Trade Routes
- Chilkat Trail
- Chilkoot Trail
- Dalton Trail
- Bureau of Land Management
- State of
- Alaska Native
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- North & South Blocks
- Heliports
- Road/Highway
- Mountain Summit
- Lower Elevation

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Map 10

BLM Ring of Fire Resource Management Plan Amendment/Supplemental Environmental Impact Statement
Scoping Report
September 2009



Mountains east of Ferebee Glacier

Bureau of Land Management
Anchorage Field Office
4700 BLM Road
Anchorage, Alaska 99507
(907) 267-1246

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I. INTRODUCTION

A. Overview, Purpose and Need for the Ring of Fire Amendment

The Anchorage Field Office of the Bureau of Land Management (BLM) finalized the Ring of Fire Resource Management Plan (RMP) by signing the Record of Decision (ROD) in March 2008. The Ring of Fire RMP provides a comprehensive framework for managing and allocating uses of the public lands and resources within the Ring of Fire planning area. The Ring of Fire ROD deferred the final determination on whether or not to designate an Area of Critical Environmental Concern (ACEC) in the Haines Block. Designation of an ACEC is made through the land use planning process, therefore the Ring of Fire RMP needs to be amended in order to address the ACEC issue. In addition, land use plan decisions establish goals and objectives for resource management (i.e. desired future conditions and best management practices), the measures needed to achieve these goals and objectives, and the parameters for resource uses on BLM-administered public lands.

The Ring of Fire RMP designated a Special Recreation Management Area (SRMA) in the Planning Area when the ROD was signed. BLM is revisiting the need for this SRMA because SRMA designation criteria have changed and significant land conveyance has occurred in the Planning Area. Lands that were managed by BLM have been conveyed to the State of Alaska causing permits that were issued by BLM on those lands to be terminated. The one permittee who operates in the SRMA has indicated that their most visited landing site is no longer safe due to melting of the glacier. They are in the process of moving those landings, which equal half of all their landings on BLM lands, to Meade Glacier in the Tongass National Forest.

The purpose of the Ring of Fire RMP Amendment/Supplemental EIS is to

1. Make a final determination on the designation of an ACEC in the Haines Block.
2. Re-evaluate the need for an SRMA.
3. Evaluate terms and conditions for special recreation permits in the planning area.

B. Description of the Planning Area

The Haines Block consists primarily of glacially covered mountains in the Coastal Mountain Range to the northwest of Skagway and Haines and in the Chilkat Range to the south/southwest of Haines. BLM-managed lands are bordered by Canada to the north and Glacier Bay National Park and Wilderness to the south with State and private lands bisecting the two Federally-owned portions. There are no roads or trails on BLM-managed lands in the planning area. The only structure managed by BLM is the Dalton Cache located on the Haines Highway at the U.S./Canada Border.

Population centers in the planning area include Haines, Skagway and the native village of Klukwan. All three towns are accessible by road.

C. Description of the Scoping Process

A Notice of Intent (NOI) to prepare the Ring of Fire RMP Amendment/Supplemental Environmental Impact Statement (EIS) was published in the Federal Register on March 26, 2009. The NOI initiated a 90-day formal scoping period that lasted until June 24, 2009. Public meetings were held during the scoping period in the communities of Haines, Skagway, and Anchorage.

The purpose of each meeting was to introduce the public to the Ring of Fire RMP Amendment and elicit public comment. Information presented at the meetings included:

- The purpose for amending the Ring of Fire RMP
- Boundaries of the planning area and changes in land status since the signing of the Ring of Fire ROD
- The Planning Schedule
- Planning Criteria
- A framework for the Plan Amendment including:
    - Specific regulatory criteria for "Relevance and Importance" which relate to the Area of Critical Environmental Concern designation.
    - Criteria used to designate a SRMA.
- Specific examples of decisions that might be made in the amendment.

The format of each meeting was open house. The Anchorage Field Manager, Ring of Fire RMP Amendment Team Lead, and Anchorage Field Office Recreation Planner were on hand at each meeting to explain the purpose of the amendment, answer questions regarding the planning effort and BLM policy and regulations, and elicit public comment on the planning criterion for BLM-managed lands. Maps of the Haines Block were available at each meeting for review. A general letter to the public announcing scoping and explaining the focus of the RMP Amendment was available at each meeting as well as land status maps of the planning area and comment forms for the public to take with them if they preferred to make comments at their leisure.

The BLM contacted the Chilkat Tribal Council regarding their desire for a government-to-government consultation during scoping. The Chilkat Tribal Council was unavailable for consultation during scoping.

Concurrent with the beginning of the scoping period the BLM developed a Ring of Fire RMP Amendment/Supplemental EIS planning website. The website has included the schedule of public meetings, information on the planning process, links to BLM criteria for allocation decisions made through the planning effort, links to all Ring of Fire RMP documents, and information on how to participate during the planning process. All planning-related documents, including this Scoping Report, will be available for online viewing.

D. Cooperating Agencies/Invitees

Cooperating agency status provides a formal framework for governmental units whether local, state, Tribal, or Federal, to engage in active collaboration with the lead Federal agency to implement the requirements of NEPA. BLM invited Federal, State, local and Tribal entities with

interest and/or special expertise to become cooperating agencies for the Ring of Fire RMP Amendment. The Municipality of Skagway has entered into formal cooperating agency status with BLM.

The State of Alaska responded that the current developed strategy for cooperation and consultation on land use planning efforts was working well for them and that they would like to participate through that manner. As part of the strategy, the State of Alaska and the BLM jointly fund a liaison position. Consolidated scoping comments were received on June 23.

The National Park Service submitted scoping comments but declined formal cooperating agency status.

E. Special Interest Groups, Agencies, and Corporations

In an effort to reach as many groups, agencies, and corporations who may have an interest in the Haines Planning Block for the Ring of Fire RMP Amendment/Supplemental EIS a general letter was sent to the entire original Ring of Fire RMP mailing list. This letter gave a brief explanation of the scope and need for the Amendment, announced the dates, time and locations for the upcoming scoping meetings and invited all stakeholders to participate in scoping by attending a meeting, visiting the website, and making comments to BLM by the deadline of June 24, 2009.

F. Federal and State Government Agencies

All of the agencies listed below received the general scoping letter after the NOI was published inviting them to participate in scoping and attend any of the three scoping meetings. These agencies have had opportunities to provide input during the scoping period, and will have additional opportunities throughout the planning process. A representative of the State of Alaska Department of Natural Resources and the State Planning Liaison attended the Anchorage scoping meeting.

National Park Service
State of Alaska, Coastal Zone Management
State of Alaska, Department of Fish and Game
State of Alaska, Department of Natural Resources
U.S. Fish and Wildlife Service
U.S. Forest Service

G. Adjacent Land Owners and Managers

The following land owners and managers were informed about the Ring of Fire RMP Amendment/Supplemental EIS planning process by mail shortly after the NOI was published. Public announcements about upcoming scoping meetings were made via public radio and ads in the local newspapers in both Haines and Skagway for two weeks prior to both meetings. Adjacent land owners and managers will continue to be kept up-to-date regarding the ongoing planning process to ensure coordination across land management boundaries and to ensure consistency with other planning efforts. Opportunities for input have been provided during the

scoping period and at public meetings. Opportunities for input will continue to be available throughout the planning process. These land owners and managers include:

Glacier Bay National Park and Wilderness
Haines Borough
Klondike National Historic Park
Klukwan, Inc.
Municipality of Skagway
State of Alaska
Tongass National Forest

H. Regional and Village Native Corporations

The Regional Native Corporation, Sealaska Corporation, was informed by mail of the start of the Ring of Fire RMP Amendment/Supplemental EIS project and initial scoping period shortly after the NOI was published in the Federal Register. The Village Native Corporation, Klukwan, Inc. was notified by mail that the Ring of Fire Amendment is taking place and asked to comment. No comments have been received to date, but opportunities to participate in the planning process will be afforded throughout the planning process.

I. Government to Government Consultation

Federally recognized Tribes have a special, unique legal and political relationship with the Government of the United States as defined by the U.S. Constitution, treaties, statutes, court decisions, and executive orders. These definitive authorities also serve as the basis for the Federal Government's obligation to acknowledge the status of Federally-recognized Tribes in Alaska. As such, it is the policy of the BLM to formally consult with Federally-recognized Tribes in Alaska prior to taking action or undertaking activities that will have a substantial, direct effect on the Tribes, their assets, rights, services, or programs. To this end, on April 6, 2009 a letter requesting government-to-government consultation was sent to the only Tribe within the planning area, Chilkat Indian Village Council. Follow up phone calls were made to John Brower with Chilkat Indian Village Council prior to the scoping meetings held in Haines and Skagway. The letter and phone calls invited Tribal representatives and their community members to the scoping meetings. Additionally, BLM offered to come to the community to conduct government-to-government consultation either before or after the Haines public scoping meeting, however Chilkat Indian Village Council did not have time for a meeting. They have not requested Government-to-Government Consultation to date but BLM is available for consultation should Chilkat Indian Village Council request it. Consultation will continue to take place with Federally-recognized traditional governments throughout the planning process in order to identify and consider Tribal concerns with regard to all BLM resource management programs.

J. Community Participation

In addition to their participation in the scheduled scoping meetings, Ring of Fire Amendment Team members have continued communicating with community members from Haines and

Skagway. Individuals from these and other communities within the planning area may provide additional data needed for planning purposes. Chilkat Indian Village Council may provide additional data on Traditional Cultural Properties and subsistence uses. Opportunities for their participation was provided at scoping meetings and during the public comment period, and will continue to be afforded throughout the planning process.

K. BLM Resource Advisory Councils

The BLM Alaska Resource Advisory Council (RAC), which advises the BLM State Director and may make recommendations to the BLM Anchorage Field and District Managers, will provide a broad spectrum of input from various interests. The advisory council was informed at their last face-to-face meeting, February 19 and 20, 2009, of beginning of the Ring of Fire RMP Amendment/Supplemental EIS project. Opportunities for input will continue to be made available at advisory council meetings and throughout the planning process.

L. Media

Use of local media is essential in providing adequate public notice for the varying stages of the planning process. Radio and print media of local and statewide circulation were used to disseminate information concerning the scoping meeting schedule. The BLM has utilized the following radio stations and newspapers for announcements of public scoping meetings:

KHNS Public Radio (Haines, Klukwan, and Skagway)
The Anchorage Daily News
The Skagway News
Chilkat Valley News (Haines, Klukwan)

II. ISSUE AND COMMENT SUMMARY

A. Issues Identified During Scoping

The majority of comments received focused on two main issues, ACEC designation and SRMA designation. Issues about the effects helicopters may have on wildlife populations were used to support or oppose these potential designations and are listed under the topic they relate to. Few comments were received on issues outside of the designations. Those comments are listed below under the heading "Other."

The following issues were raised during the Ring of Fire RMP Amendment scoping period.

1. ACEC Designation – Does area meet criteria for ACEC designation with respect to visual, wildlife and geologic hazard resources?
2. SRMA Designation

B. Summary of Public Comments

A total of 33 comments were received during the public scoping period for the Ring of Fire RMP Amendment. Comments were analyzed in detail and resulted in the identification of planning

issues that will be addressed during the development of the RMP Amendment. An issue is defined as a matter of controversy or dispute over resource management activities or land use that is well defined or topically discrete, and has alternatives between which to decide.

Comments are organized by issue. For a summary of the scoping comments please see Appendix A.

1. ACEC Designation

Nominations for ACEC designation were received on all BLM lands within the Planning Area. The current goat Monitoring and Control Area within the northwest portion of the planning area was further nominated as a Research Natural Area (RNA), a type of ACEC. Most comments only expressed their support for ACEC designations without going into how the lands would meet the Relevance and Importance Criteria BLM uses to evaluate the lands for such designation. A few comments did give specific information that the BLM will consider when making the ACEC determination. One comment in opposition to an ACEC was received. It stated that "there is no compelling reason to nominate these areas as an ACEC."

a. Fish and Wildlife

The majority of comments discussed wildlife and their habitat, particularly goats, as the main reason to create an ACEC. Two comments contended that the "overwhelming majority of naturally occurring goat populations on BLM managed lands nationwide are located in the Haines/Skagway vicinity" thereby making them more than locally significant. Many more comments contend that goat populations around Haines and Skagway are on the decline due to helicopter-supported recreation.

While most comments focused on the direct impacts to certain wildlife, some comments focused on the predator/prey relationship and the effects helicopter supported recreation may have on that balance. As an example, a comment said "The Monitoring and Control Area is also in close proximity to the Alaska Chilkat Bald Eagle Preserve, home to the world's largest gathering of bald eagles. Eagles feed on goat carrion. Therefore, protecting goat populations from impacts associated with helicopter-supported recreation in the vicinity of the Bald Eagle Preserve is relevant, important, and more than locally significant."

Goats were also mentioned as an important species for local hunters as well as an economic species for both guiding services and tourist viewing.

In addition to goats, bears, wolverines and eagles were all mentioned as wildlife affected by helicopter-supported recreation activities in the Planning Area and suggested as meeting the importance criteria for creating an ACEC.

b. Cultural

One comment referred to the importance of goat wool as a resource for traditional blankets made by Native weavers. "The Chilkat Tlingit's are historically recognized as master weavers of Chilkat blankets from mountain goat wool. Creating an ACEC designation to protect the existing Monitoring and Control Area from impacts associated with helicopter-supported

recreation would protect an important resource that has significant historic and cultural value in close proximity to the Chilkat Indian Village of Klukwan."

c. Visual

One comment nominated two ACECs within the planning area because of their "significant scenic…resources." The two significant BLM-managed blocks of land in the Planning Area were the areas nominated.

d. Subsistence

Several comments discussed the importance of goats in the Haines Block as a potential food source for local residents.

2. SRMA Designation

Comments varied on whether or not the SRMA designation in the planning area should be kept. Many comments appeared to not know that a SRMA was already designated in the Ring of Fire RMP and that this Supplement is looking at whether or not to retain the designation.

a. Recreation and Visitor Services

Most of the comments received expressed concern about helicopter-assisted, commercially-guided landing tours and their various effects to wildlife, habitat, and lands and resources including those managed by other agencies. Many comments recommended that permitted commercial helicopter-supported tourism not be allowed on BLM-managed lands in the Planning Area. One comment recommended that "the flight corridor along the Dyea and Chilkoot Trail unit of the park not be used for helicopter assisted sight-seeing, especially if other suitable alternatives can be identified." Another suggested that no helicopter activity should be permitted until baseline studies of helicopters effects on wildlife are done.

Two comments were received in support of the SRMA designation. One comment recommended that BLM "apply SRMA status liberally throughout Haines watersheds whenever and wherever adequate baseline data is insufficient." The other comment is supportive of the existing designation because of the "high level of recreational use in the area" and that it meets the objectives and policies of the State of Alaska's Northern Southeast Area Plan.

b. Comprehensive Trails and Travel Management; Access

One comment was received on OHV use in the planning area. The comment focused on climate change and how it may compound the effects of OHV use on trails in the planning area.

3. Other

a. Water Resources/Water Quality

Several comments were received regarding water resources and quality in the Ring of Fire RMP Amendment planning area. Ensuring compliance with the Clean Water Act (CWA) was mentioned. Water quality degradation of water bodies is a primary concern with special emphasis on public drinking water supplies. One comment expressed concern on the effects climate change may have on water resources. It was recommended that BLM consider the

implications that landscape level change may have on the commitment of water resources and the short and long term health of aquatic systems.

b. Wetlands and Riparian Areas

One comment was received regarding wetlands and riparian areas. In particular compliance with the CWA Section 404 requirements which regulate discharge of dredge or fill material into waters of the U.S., including wetlands and other special aquatic sites.

c. Soil

Soils were mentioned in several comments. One comment acknowledged that the melting of permafrost "is known to cause significant changes in the landscape, from thermokarsts across the landscape slumping into rivers to the expansion and loss of water bodies." This comment encouraged BLM to "include plans for better understanding permafrost and soils and to seek funding for such surveys, and ultimately, to incorporate this information into land management planning." Concern about the potential impacts OHV use may have on the landscape and trails in particular was expressed.

d. Vegetation

Several comments discussed vegetation resources in the planning area. One comment talked about vegetation being affected by climate change and requested that BLM establish migration corridors to "allow species movement and vegetation shifts among islands of suitable habitat."

e. Wilderness Characteristics

One comment suggested that BLM evaluate lands within the Haines Planning Block for potential Wilderness designation.

f. Climate Change

Two comments were received regarding climate change. One comment stated that the "problems of anthropogenic climate change must be addressed at the source if we are to preserve a physically and socially acceptable existence. No new development should be contemplated that does not anticipate zero net emissions."

Another comment suggested that BLM make the issue of climate change a priority and incorporate it into all planning and management strategies. Specifically, the comment stated that the following points of discussions should be incorporated into the Ring of Fire Supplemental EIS:

"1) Provide training on climate change and variability for all resource managers;
2) Consider climate change and variability as a component of long-range management plans and strategies, as well as prioritizing adaptive management;
3) Implement monitoring and assessment programs for impacts to wildlife and wildlife habitats expected to be sensitive to climate change;
4) Educate the public about climate change and its effects on Alaska public lands and resources;
5) Establish and maintain migration corridors that allow species movement and vegetation shifts among islands of suitable habitat;
6) Increase buffer zones around identified critical habitat in order to increase options for species under various climate change scenarios;

7) Protect riparian and wetland communities to promote resilience of these important and susceptible habitats;
8) Make the reduction and elimination of human-induced synergistic impacts a top priority for land and resource management."

g. Minerals

One comment was received regarding mineral resources. It stated that they felt the Ring of Fire RMP provided adequate resource protections and opportunities for access to state lands and mineral resources and development of BLM mineral resources.

h. Land and Realty

One comment was received regarding access to non-federal lands. It requested that this plan ensure that access is provided to non-federal lands through BLM lands.

i. Planning

Comments received about planning had to do with BLM acknowledging and/or adopting plans or management intent of other land owners surrounding BLM lands. One comment pointed out that the State of Alaska had prepared a plan for state-selected lands in the area and requested that BLM adopt the State's management intent for all state-selected lands (nearly all BLM lands in the Haines Block). Another comment requested that BLM manage lands adjacent to the Park Service lands in a manner that would provide a "buffer" to Park lands.

j. Studies and Data Gaps

All comments received regarding the need for studies focused on the affects to goats and other wildlife from helicopter supported activities. The following comment is a representative sample of that belief, "After years of issuing helicopter landing permits without understanding the ramifications to wildlife (particularly goats, brown bears, and wolverine), BLM should prioritize doing the necessary research." Many of the comments went on to identify the monitoring and control area as the "last remaining area" without impacts from helicopter supported commercial activities and how important a control area in determining "what impacts are related to helicopter disturbance vs. background environmental conditions such as heavy snowpack, predation etc."

One comment stated that an "assessment of unique plant species" is needed in the planning area. Because without it "there is no way of ascertaining whether or not the Monitoring and Control Area would also qualify for ACEC designation under BLM 1613.1.11A(3)."

One comment stated that BLM should seek funding for soil surveys in order to better understand permafrost and soils in the planning area.

C. Decisions to be Made

The Ring of Fire RMP Amendment will make the following decisions:

1. Whether to designate any BLM lands in the Haines Planning Block as an Area of Critical Environmental Concern.

2. Whether to keep the Special Recreation Management Area designation within the Haines Block.
3. If the SRMA is retained, determine the Recreation Management Zones and adjust the boundary of the SRMA if necessary.
4. Whether to keep the goat Monitoring and Control Area.
5. Whether the current Required Operating Procedures and Stipulations for Special Recreation Permits is adequate.

D. Issues Raised During Scoping that Will Not Be Addressed

Wilderness Designation and access issues are outside the scope of this planning effort and will not be addressed. Both topics have been addressed in the Ring of Fire RMP.

The BLM will manage the river segments within the planning area which have been determined to be eligible for inclusion in the Wild and Scenic Rivers System to protect the identified Outstanding Remarkable Values pursuant to the guidance found for interim management in BLM Manual 8351.32 Classification and Protection Management. Wild and Scenic River suitability determinations were deferred in the Ring of Fire Approved RMP until the ownership patterns within the planning area are better defined. This effort is outside the scope of this RMP Amendment and will be determined in a future RMP Amendment.

The issue of climate change was recognized and previously addressed in the Ring of Fire RMP in Chapter IV, page 4-135. The Ring of Fire RMP says, "Climate change is both a Reasonably Foreseeable Future Action that can result in additive and synergistic effects with BLM management actions in the Ring of Fire planning area, and can also be affected by management actions taken. Evidence is emerging that climate warming in Alaska can be linked to changes occurring in the structure and function of terrestrial ecosystems throughout the State. Since the 1950s, Alaska has warmed by an average of four degrees Fahrenheit (USEPA 2005). The assessment of the impacts of climate change is in its formative phase, and it is not yet possible to know with confidence the net impact of such change. However, observed changes include warming of permafrost throughout the State, the decrease in area of closed-basin lakes in southcentral Alaska, increased water temperature affecting anadromous fish habitat, and the altering of the ranges of some bird species. Climate change has also been linked to changes in disturbance regimes like fire and insect outbreaks in southcentral Alaska (McGuire 2003).

"Development of oil and gas resources would produce some of the common greenhouse gases, primarily as a result of power requirements and fuel consumption, activities that produce CO. Because climate change must be viewed from a global perspective, the magnitude of the emissions potentially contributed by oil and gas activities in the planning area needs to be viewed in that context. The incremental contribution of greenhouse gases resultant from any of the alternatives in the Ring of Fire PRMP/FEIS would be minor when compared to total greenhouse gas contributions from sources outside of BLM actions in the planning area."

The Ring of Fire RMP Amendment/Supplemental EIS is revisiting administrative decisions. Climate change will be analyzed in this Supplemental EIS only to the extent that it is affected by decisions that are developed in the plan. Proposed recreation decisions and possible effects that

may result in climate change will be viewed in a global perspective, as directed in the Ring of Fire RMP. Considerations of effects from other uses and activities that may or may not result in climate change are outside the scope of this planning effort.

E. Valid Existing Management to Be Carried Forward

In addition to the Ring of Fire RMP that was finalized and signed in March 2008, other management policies, Federal Regulations, and guidance exist for the Ring of Fire RMP Amendment Planning Area. The Ring of Fire RMP Amendment will only amend certain parts of the Ring of Fire RMP including ACEC determinations, Special Recreation Management Area designation, and Monitoring and Control Area designation. The Ring of Fire RMP Amendment will evaluate the current Required Operating Procedures and Stipulations for Special Recreation Permit holders and may revise some or all of them.

III. PLANNING CRITERIA

The planning criteria were included in the RMP Amendment preparation plan.

Planning criteria are based on the applicable laws and regulations providing agency guidance as well as on consultation and coordination with all participating agencies and entities. The criteria are also based on the pertinent information and the professional judgment of the planning team. Planning criteria may be amended, supplemented or changed as the need dictates. The Ring of Fire RMP Amendment Planning Criteria are listed below.

1. Multiple-use by the general public is the primary function of BLM administered lands managed within the Haines planning Block.
2. Decisions will be made for the surface lands administered by the BLM in the Haines Block.
3. Decisions will be limited to those related to recreation (i.e., SRMA/ERMA, special recreation permits), wildlife, travel management, and special designations (i.e., ACECs).
4. Valid existing rights will be protected throughout the planning area.
5. Plans and policies of other federal land managers, land owners and State and local governments in and adjacent to the Haines Block will be considered, and BLM's decisions will be consistent with other land manager's and owner's decisions to the degree reasonably practical within existing laws.
6. The BLM will encourage and participate in collaborative planning and management. BLM will provide opportunity for input from other federal agencies, the State of Alaska, Native governments and Tribal members, local government, adjacent private land owners, local residents and other affected and/or interested parties.
7. Identification, designation, and protection of a Special Recreation Management Area (SRMA) and ACEC (area of critical environmental concern) will receive full consideration.
8. The BLM will comply with all relevant laws, statutes, regulations, manuals, and handbooks.
9. Subsistence uses will be considered and adverse impacts minimized in accordance with Section 810 of ANILCA.

10. Resource management plans prepared by BLM will conform to the Bureau's H-1601-1 Land Use Planning Handbook, Appendix C, Program-Specific and Resource-Specific Decision Guidance and supplemental program guidance manual for ACECs
11. The plan will be consistent with the Alaska Land Health Standards.
12. Designations for Off-Highway Vehicles for all public lands within the planning area will be completed according to the regulations found in 43 CFR 8342.
13. Areas of proposed ACEC designation will meet the criteria found in 43 CFR 1610.7-2.

Alternatives for the use and protection of BLM administered lands will be developed in this planning process. The alternatives will reflect the issues identified and will consider a range of opportunities for:

1. recreation objectives, opportunities, and uses;
2. protection of crucial habitat for priority wildlife species; and
3. SRMA/ERMA reevaluation, designation, and delineation
4. Evaluate for potential special management areas (e.g., RNAs, ACECs)-designate and delineate boundary if applicable

IV. SUMMARY OF FUTURE STEPS IN THE PLANNING PROCESS

1. Analyze the Management Situation. Preparation of an Analysis of the Management Situation (AMS) is the next step in the process after scoping. The AMS describes the current condition and trend of resources in the planning area, current BLM management of those resources, and opportunities to resolve issues identified during scoping. This analysis provides the baseline reference for the development and evaluation of alternatives. The AMS for the Ring of Fire RMP Amendment planning area is being developed and should be completed fall 2009.
2. Formulate Alternatives. Alternatives will be formulated by identifying a range of resource objectives and management practices that will address the issues. A no-action alternative will also be included. Alternatives will be developed for the Ring of Fire RMP Amendment in the fall of 2009.
3. Analyze the Effects of the Alternatives. Once the alternatives are developed, the effects of each alternative on the biological, physical, social, and economic environment will be analyzed in the fall of 2009.
4. Issue the Draft RMP Amendment/Supplemental EIS. This step will begin with the release of the draft RMP Amendment/Supplemental EIS for a 90-day public review period. Public meetings will be scheduled during this time. A notice of availability will be published in the Federal Register in fall 2009. The public comment period will begin with publication in the Federal Register.
5. Issue the Proposed RMP Amendment/Supplemental EIS. Based on the information contained in the draft RMP Amendment/Supplemental EIS and public comment received, the BLM will select a proposed alternative and present it to the public as the Proposed RMP Amendment/Final Supplemental EIS. This step will include the public notices of the document's availability, the distribution of the document, and a 30-day protest period on the final document. The BLM will begin this step in winter 2009/2010.
6. Issue the Record of Decision and Approved RMP Amendment. The BLM expects this step to take place in summer 2010.

Appendix A: Scoping Comment Summary

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
ACEC		I wish to strongly support an Area of Critical Environmental Concern designation for the area "Haines Block."	6, 7, 9	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.
		Protect the "control" area by not putting it into a SRMA, but rather an ACEC in recognition of the significance of a mt goat resource that is currently protected from helicopter landings.	2, 10, 14, 17, 19, 28, 29	Yes	See response to above comment.
		My review of the data presented indicates that there is no compelling reason to nominate these areas as an ACEC. A.) There are no locally significant qualities that give this area special concern. B.) There are no fragile, sensitive or threatened circumstances. C.) There are no topics warranting protection to satisfy national concerns. D.) No proposed management by the BLM using normal land management practices will cause a threat to human life or property.	5	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
	Scenic	The NPS supports designation of the BLM tract adjacent to Glacier Bay National Park and Preserve as an Area of Critical Environmental Concern (ACEC). This area contains significant scenic value and wildlife resources. ACEC designation would complement the park and provide an additional level of protection to lands adjacent to the park.	33	Yes	Lands within the Planning Block will be evaluated for potential ACEC designation.
		The NPS also recommends that the northern tract be considered for ACEC designation due to its scenic and wildlife resources	33	Yes	See above.
Cultural		Relevance: The Chilkat Tlingits are historically recognized as master weavers of Chilkat blankets from mountain goat wool. Creating an ACEC designation to protect the existing Monitoring and Control Area from impacts associated with helicopter-supported recreation would protect an important resource that has significant historic and cultural value in close proximity to the Chilkat Indian Village of Klukwan. Relevance: The Monitoring and Control Area is also in close proximity to the Alaska Chilkat Bald Eagle Preserve, home to the world's largest gathering of bald eagles. Eagles feed on goat carrion. Therefore, protecting goat populations from impacts associated with helicopter-supported recreation in the vicinity of the Bald Eagle Preserve is relevant, important, and more than locally significant.	16	Yes	Information provided will be taken into account when BLM analyzes areas for potential ACEC designation.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		Relevance: Lastly, and of particularly significant relevance, is that the overwhelming majority of naturally occurring goat populations on BLM managed lands nationwide are located in the Haines/Skagway vicinity. (See LCC's original ACEC nomination letter). Nearly all naturally occurring goat populations on BLM lands in the Lower 48 are gone; therefore, BLM is required to "consider the relative scarcity." (43 U.S.C. 1712 Section 202(c)(6)). This makes the Haines/Skagway goat population a significant wildlife resource that is more than "locally significant."	16, 31		See above.
		Importance: We contend that this resource is more than locally significant due to the decline in naturally occurring goat populations on BLM managed lands elsewhere, and the close proximity of the Monitoring and Control Area to the Alaska Chilkat Bald Eagle Preserve and the weavers of Chilkat Blankets.	16		Information provided will be taken into account when BLM analyzes areas for potential ACEC designation.
		Importance: Haines/Skagway goat populations are currently threatened by acknowledged adverse impacts of "unspecified magnitude" from the increasing use of helicopters on and over goat habitat.	16		Information provided will be taken into account when BLM analyzes areas for potential ACEC designation.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		There is also evidence that declines predicted by these studies are indeed occurring in the Haines/Skagway area: "1999: severe winter weather. Helicopter tourism/glacier landing exposure area suffered significant failure of reproduction and population decline whereas control areas stayed about the same as the previous four years. There is a possibility of cumulative stress from pre-winter tourism activities resulting in enough of a body condition deficit that harsh winter stresses resulted in at least a one season reproductive failure and adult mortality above that experienced in control areas. There appears to be declines or abandonment in use of kidding areas adjacent to landing sites in at least one situation."	16		Information provided will be taken into account when BLM analyzes areas for potential ACEC designation.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		Importance Criteria: Bald eagles are predators that rely on goat carrion and young lambs as a food source. Successful eagle nesting "is dependent, in part on available carrion and high protein intake for successful breeding and hatching success." (Id). Healthy goat populations are especially important for nesting eagles in the Haines area because of the proximity of BLM lands to the Alaska Chilkat Bald Eagle Preserve (CBEP), home to the world's largest gathering of bald eagles, with a high density of nesting eagles. Again, the proximity of the CBEP to the Monitoring and Control Area, the national significance of the CBEP, and the dependence of eagles on carrion, make the goat resource more than locally significant.	16		Information provided will be taken into account when BLM analyzes areas for potential ACEC designation.
ACEC – RNA		Establish a RNA to do the long-term studies needed to determine impacts to the goat and other wildlife	2, 12, 17	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.
		The BLM lands located North of Klukwan to the Canadian Border need to be managed as an NRA (sic).	3	Yes	See above
		I further support including the goat monitoring area in a Research Natural Area (RNA) designation.	7, 24, 25, 27	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		This (RNA) designation would increase the likelihood of obtaining funding for research on the obvious impacts of landing large noise producing machines in the few remote areas the mountain goats still call home.	7	No	The likelihood of obtaining funding is not a criteria used in designating an ACEC/RNA. BLM is mandated to use the criteria set forth in 43 CFR 1610.7-2 Designation of areas of critical environmental concern.
		Establishing an Area of Critical Environmental Concern/Research Natural Area (ACEC/RNA) would be the obvious first step (to understanding ramifications to wildlife from helicopter activity).	11, 17	No	Establishment of an ACEC/RNA does not necessarily mean that the studies needed to determine ramification to wildlife from helicopter activity would be funded.
		The existing Monitoring and Control Area needs to be retained and placed in an Area of Critical Environmental Concern and managed as a Research Natural Area. My reasons for this action are as follow. The existing Monitoring and Control Area is the only significant remaining goat habitat in the Haines/Skagway area currently NOT impacted by helicopter landings. BLM has an obligation to protect it.	11, 12, 13, 15, 17, 20, 21, 22, 23	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		The current Monitoring and Control Area should be designated an ACEC and managed as a RNA… It is the perfect study area because near-by goat populations have been seasonally disturbed in varying intensities, by both summer and winter helicopter use. Since BLM continues to issue helicopter landing permits, the agency has a responsibility to determine impacts caused as a result of issuing permits. Opportunities for education are also a natural fit for the Haines Area. The Alaska Chilkat Bald Eagle Preserve has a mandate to provide continued opportunities for research and education. In addition to studying eagles in Haines, mountain goat research could occur as a result of creating a RNA. Closely situated areas created to protect goats and eagles would offer interesting and creative opportunities for public education.	16	Yes	The lands in the planning block will be evaluated against the ACEC planning criteria and a determination of whether to designate an ACEC will be made.
	Habitat	The goat habitat is critical.	6	Yes	BLM will consider the amount and location of goat habitat during this Amendment and with any future Special Recreation Permit Applications.
		The public lands of the Upper Lynn Canal Area are both heavily used by helicopter-based recreation firms/users and are perhaps some of North America's finest habitat for mountain goats.	3	Yes	BLM will consider the amount and location of goat habitat during this Amendment and with any future Special Recreation Permit Applications.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		The Mountain Goat Monitoring and Control Area is an extremely important public lands area for the protection of habitat for mountain goats and other wildlife including wolverines and brown bears.	20	Yes	BLM is currently abiding by the Monitoring and Control Area. A determination of whether or not to keep it will be made through this planning effort.
		The mountains of Upper Lynn Canal contain some of the worlds premium mountain goat habitat.	22	Yes	Goat habitat will be taken into consideration during this amendment.
		The BLM has an obligation to enhance the habitat and populations of the Haines/Skagway goats; nationally, mountain goat populations are in decline due to a loss of habitat and increased human disturbance.1 1 1997 USDA Helicopter Landings in Wilderness EIS at 4-19	26	Yes	BLM will consider the amount and location of goat habitat during this Amendment and with any future Special Recreation Permit Applications.
		Unfortunately for the local mountain goat population they have little option in their choice of home and habitat. There is much debate about the acceptable level of noise pollution mountain goats can tolerate. This question remains unresolved even though a Monitoring and Control Area was established in 2002 to better understand mountain goat adaptability and limit landings in the Lynn Canal area.	28	Yes	BLM will consider the amount and location of goat habitat during this Amendment and with any future Special Recreation Permit Applications.
Land, Land Use, and Access		Because ADNR Area Plans establish management intent for state-selected lands, we request that BLM adopt the management intent for state-selected lands from the area plans for these areas.	18	Yes	Noted.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		If there are any BLM lands adjacent to state land that are not state-selected, appropriate access should be maintained through these federal areas	18	No	Access is outside the scope of this planning effort.
		While helicopter-assisted recreation is increasing in our area, there are ample areas where these activities are permitted. We don't need to create more at the expense of advancing knowledge.	29	Yes	BLM is currently abiding by the Monitoring and Control Area. A determination of whether or not to keep it will be made through this planning effort.
Research/Monitoring	Data Gaps	A long term mngt plan must be based on detailed biological, physiological and economic aspects of each herd in each watershed of Haines.	4	Yes	Research needs will be identified during this planning effort.
		Not enough has been done to assess the effect of helicopters on goat habitat.	10	Yes	BLM will assess what is known about the effects of helicopters on goat habitat.
		Studies of long and short-term impacts to goats from helicopter activity are long overdue. After years of issuing helicopter landing permits without understanding the ramifications to wildlife (particularily goats, brown bears and wolverine), BLM should prioritize doing the necessary research.	11, 12, 23	Yes	Research needs will be identified during this planning effort.
		there is very little long term reliable info on what the effects of helicopters have on goats. This area seems to be one of the few places that information could be attained and it would be irresponsible to change that.	15	Yes	Research needs will be identified during this planning effort and a determination of whether or not to keep the monitoring and control area will be made.
		We have incrementally permitted more and more helicopter tours without having a baseline of protection or understanding of limits needed to protect goats and goat habitat.	21	Yes	Research needs will be identified during this planning effort.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		Without a control, it is virtually impossible to say what impacts are related to helicopter disturbance vs backgound environmental conditions such as heavy snowpack, predation etc. Such knowledge is essential to understanding where and when it may be appropriate to allow helicopter usage or similar disturbances.	22	Yes	BLM will make a decision on whether or not to keep the monitoring and control area through this planning process.
		Studies have been done to quantify the behavioral response of mountain goats to helicopter traffic, but we need studies that go beyond the temporary observation of a limited number of goats. While behavioral studies provide data about the immediate impact of helicopters, what is really needed are studies on how helicopter traffic affects the long-term survivability of mountain goat populations.	27	Yes	BLM will consider all known data during the planning process.
		The area contains glaciated landforms and to date there has been no assessment of unique plant species. Because no assessment has been done there is no way of ascertaining whether or not the Monitoring and Control Area would also qualify for ACEC designation under BLM 1613.1.11A(3).	16	Yes	All ACEC criteria will be considered.
Monitoring and Control Area		BLM's priority must include securing areas that are unused by helicopter recreationists, so that one day studies can be done to assess impacts. BLM and other state agencies will never be able to assess impacts to m. goats if it does not have sizable "control" area.	3	Yes	BLM will make a decision on whether or not to keep the monitoring and control area through this planning process.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		If you doubt that mountain goats are impacted by the unnecessary landing of helicopters in their habitat then it is even more vitally necessary for the mountain goat Monitoring area to be protected by enclosing it in an area of critical environmental concern. The goat monitoring area should absolutely not be included in the SRMA if the SRMA is to be retained. It must be kept off limits to any helicopter landings in all seasons.	7	Yes	BLM will make a decision on whether or not to keep the monitoring and control area through this planning process.
		It takes a non-impacted control area to study these effects and I see it as a mistake to give up the one already in place that can be used in future years and future studies.	15	Yes	BLM will make a decision on whether or not to keep the monitoring and control area through this planning process.
Recreation		No helicopter activity should be permitted. Baseline studies for a period of years are needed now. Without these, no consideration of disruption by helicopters should be allowed.	6	Yes	
		I support winter heli ski industry in Haines – but not at the expense (impact, stress, disturbance, etc.) of these extremely valuable mtn goat herds.	4	Yes	BLM will re-evaluate the terms and conditions it puts on all recreation permits as part of this planning effort.
		Please apply SRMA status liberally throughout Haines watersheds whenever and wherever adequate baseline data is insufficient.	4	Yes	
		In addition to summer helicopter tours on BLM lands from Skagway, increasing levels of heli-skiing activities are currently permitted on BLM and state lands in the Haines area.	16		

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		The State [of Alaska] is supportive of the existing SRMA designation because of the high level of recreational use in the area and the objectives and policies of the Northern Southeast Area Plan.	18	Yes	BLM will re-evaluate the SRMA designation in the Haines Block and will take into consideration how surrounding non-BLM lands are managed.
		The NPS is concerned about helicopter-assisted, commercially-guided landing tours adjacent to and crossing the park's boundary. NPS recommends that permitted commercial helicopter use be prohibited in this area (GLBA).	33	Yes	Noted.
		Because of the potential for impacts to park resources and values the NPS recommends that the flight corridor along the Dyea and Chilkoot Trail unit of the park not be used for helicopter assisted sightseeing, especially if other suitable alternatives can be identified	33	Yes	Noted.
Wildlife		Due to elevations of BLM lands, my principal concern for management plan by BLM concerns proper protection and management of the mountain goat populations in the Haines region.	4	Yes	Noted.
		These (mtn goat) populations are World Class.	4	Yes	
		Helicopter recreation will impact the goat population and should not be allowed to increase in any way.	7	Yes	
		Recreational activities in this block would certainly impact wildlife populations negatively.	9	Yes	

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		In other parts of the world, it's become clear that, over time, stress from helicopter tours has had negative impacts on wildlife, for example contributing to the endangerment of mountain caribou in British Columbia.	21	Yes	BLM will consider existing data regarding effects that helicopters have on wildlife in the Haines Block.
		Research and monitoring are necessary because Haines/Skagway goat populations are currently threatened by acknowledged adverse impacts of "unspecified magnitude" form the increasing use of helicopters inside and over goat habitat. Specific scientific concerns about impacts to mountain goats include: displacement from prime habitat, acute or chronic reduction in foraging efficiency resulting in nutritional deficiency, reproductive failure, and increased vulnerability to predation. (1995 BLM and USDA EA for Helicopter Landing Toursin the Skagway and Haines Area, pages 3-12 and 3-13).	31	Yes	See above.
		Wolverine populations may also be at risk: "Wolverine natal dens are typically located on the specific kind of areas proposed for heliskiing. Wolverine populations are never considered abundant and natal dens are sparsely distributed." (Id).	16	Yes	See above.
Miscellaneous		suspend all existing activity that may impact wildlife population until you acquire the needed means (to conduct studies on impacts).	19		

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		require user groups to pay for the necessary comprehensive research and monitoring, analyze the results and then permit activities that pose no threat the continued health and welfare to species and habitat of concern.	19, 20		
		These herds are enjoyed by recreationists and hunters alike. They help to support a valuable guiding industry, and though not agency listed as a subsistence specie, goats are certainly utilized as such by a number of local area hunters.	22	Yes	
		We and our neighbors depend on mountain goats as a potential food source.	29		
Climate Change		We recommend that the BLM take this opportunity to identify and remedy the inadequacies through this SEIS process for recreation, wildlife, travel, habitat management and ACEC and SRMA designations – all within the scale of review for the SEIS. (In regards to Climate Change).	26		
		We encourage the SEIS to include plans for better understanding permafrost and soils and to seek funding for such surveys, and ultimately, to incorporate this information into land management planning.	26	No	Understanding permafrost and soils is outside the scope of this SEIS. BLM is in the process of obtaining funding for soil surveys outside of the planning area and agrees with the importance of such studies.

Resource Area	Issues	Comment	#	Addressed in EIS?	Response (does not support or refute comment)
		The BLM needs to consider the impacts of climate change on subsistence resources and practices. Changes in habitat within and beyond BLM managed lands are predicted to stress all of the wildlife, waterfowl and fish populations that serve as subsistence resources. Some populations may increase in abundance within the planning area while others may later their migration and be unavailable. We encourage the BLM to consider Wilderness designation and National Wild and Scenic River Status as tools which can help wildlife populations adapt in a less disturbed environment during climate change while insuring subsistence access to needed resources.	26	No	There is no indication of changes to subsistence in the planning area. BLM will continue to monitor the effects climate change may have on subsistence issues and be responsive when they do arise. Wilderness designation and National Wild and Scenic River Status are outside the scope of this planning effort.
		The problems of anthropogenic climate change must be addressed at the source if we are to preserve a physically and socially acceptable existence. No new development should be contemplated that does not anticipate zero net emissions.	30		

COMMENT NUMBER KEY

#	Name	Address
1	Jean Public	Florham Park, NJ
2	Nancy Berland	Haines, AK
3	Burl Sheldon	Haines, AK
4	Ray Staska	Haines, AK
5	Nicholas Van Wyck	Anchorage, AK
6	Peter Goll	Haines, AK
7	Sherrie Goll	Haines, AK
8	JoAnn Ross Cunningham	Haines, AK
9	Laurie Dadourian	Haines, AK
10	Bob Andrews	Haines, AK
11	Bruce Baker	Auke Bay, AK
12	Tim McDonough	Haines, AK
13	Ann Myren	Haines, AK
14	Ron Jackson	Haines, AK
15	Mardell Gunn	Haines, AK
16	Lynn Canal Conservation	Haines, AK
17	Irene Alexakos	Haines, AK
18	State of Alaska	Anchorage, AK
19	Kip Kermoian	Haines, AK
20	Patricia Kermoian	Haines, AK
21	Sue Libenson	Haines, AK
22	Mike Van Note	Haines, AK
23	Thom Ely	Haines, AK
24	Eric Holle	via email, no address
25	Katey Palmer	Haines, AK
26	Alaska Wilderness League	Anchorage, AK

#	Name	Address
27	Carolyn Weishahn	Haines, AK
28	Ben Kirkpatrick	Haines, AK
29	The Zeiger Family	Haines, AK
30	James M. Byrnes	Eagle River, AK
31	The Wilderness Socitey	Anchorage, AK
	Sierra Club Alaska Chapter	
	Defenders of Wildlife	
	Alaska Quiet Rights Coalition	
	Alaska Wildlife Alliance	
	Alaska Wilderness League	
	Alaska Center for the Environment	
	Southeast Alaska Conservation Council	
32	U.S. Environmental Protection Agency	Seattle, WA
33	National Park Service	Anchorage, AK

APPENDICES

APPENDIX A: BLM RING OF FIRE RESOURCE MANAGEMENT PLAN AMENDMENT PUBLIC COMMENTS

Comments from 2018 Public Outreach

First	Last	Contact Information	Category	Comment
Scott	Bradford	bradfordscott@usa.net	General	More heli skiing, more logging, more mining
Ben	Anderson	ben@seaba-heli.com	Range of Alternatives	Alternative B. Would like 4000 landings available for winter use to be split between the heli-ski operations in Haines.
Ben	Anderson	ben@seaba-heli.com	Wildlife	Goat study does not specify if helicopter use is impacting wildlife populations or where the populations are located.
Ben	Anderson	ben@seaba-heli.com	Wildlife	Goat and Bear habitat drawn on the map was based on elevation, and isn't made clear how heli-skiing is impacting them.
John	Bressette	johnbressette@hotmail.com	Range of Alternatives	Alternative B. Would improve safety by giving guides the ability to pick runs based on snow and avalanche conditions instead of what is available to them, and will allow more room for competing operations.
Rob	Johnston	rjohnston@gopartnership.com	Range of Alternatives	Support Alternative B.
Benjamin	Silverman	blueoaklandscapingchico@gmail.com	Range of Alternatives	Support Alternative B.
Jason	Gregg	jason.a.gregg@gmail.com	Range of Alternatives	Support Alternative B.
Natalie	Segall	natalie@peak2peaklegal.com	Range of Alternatives	Support Alternative B. Additional landings will boost tourism/economy.
Tom	Konop	konop@gci.net	Range of Alternatives	Support Alternative B. Split 4000 landings in South Block in Haines.
Tom	Konop	konop@gci.net	Recreation	The inability to land in certain areas and with only 100 landings is very limiting to the industry.
Tom	Konop	konop@gci.net	Recreation	Increasing the landings will allow for more economic benefit to Haines.
Sebastien	Barlerin	seb.barlerin@gmail.com	Range of Alternatives	Support Alternative B.
Matt	Taylor	mattftaylor@gmail.com	Range of Alternatives	Support Alternative B.
Will	Overlock	willoverlock@hotmail.com	Range of Alternatives	Support Alternative B.
J.B.	Green	johnbgreen3@gmail.com	Range of Alternatives	Support Alternative B.

First	Last	Contact Information	Category	Comment
Austin	Shannon	austinhshannon@gmail.com	Range of Alternatives	Support Alternative B.
Miles	Furniture	miles1@aptalaska.net	General	More heli skiing, more logging, more mining
Eli	Fierer	directors@alaskamountainguides.com	Recreation	Helicopter landings in the North Block (Skagway Area) currently this is not allowed, and has been waiting a decision for nearly 10 years. We would like to see a similar volume of availability for the north Block as is currently permitted in the South Block.
Eli	Fierer	directors@alaskamountainguides.com	Recreation	Increased helicopter landings in the South Block (Haines Area) for existing heli-ski operators – we believe that a modest increase in helicopter landings would not equate to substantially more use (due to Haines Borough permitting process), and would alleviate congestion and increase safety for heli ski operators with minimum detriment to wildlife or other users. Use is currently 300 landings, would like to see this increase to 1500 (500 for each operator).
Eli	Fierer	directors@alaskamountainguides.com	MCA/ Recreation	Change of Goat monitoring & control area in North Block – we'd like to see this area adjusted, and perhaps decreased in size, to allow some access for commercial operators on the fringes of this area (close to Haines, and close to Skagway specifically) While we think that the monitoring and control area is an important facet for viability and accuracy of long term wildlife studies, we feel that the area could/should be smaller, thus opening up areas in closer proximity to Skagway and Haines for commercial recreation.
Anne	Matsov	anne_matsov@nps.gov	Visitor Experience	**VISITOR EXPERIENCE:** Chilkoot Trail We currently manage the Chilkoot Trail under a Memorandum of Understanding with State of Alaska's Department of Natural Resources as a recreational experience along a hiking trail lined with in situ Klondike Gold Rush era historic archaeology. Any use of state selected land along the trail other than hiking would be in conflict with its current recreational use.
Anne	Matsov	anne_matsov@nps.gov	Visitor Experience	**VISITOR EXPERIENCE**: Chilkoot Trail; We support a wide variety ofrecreational uses including hunting, fishing, and backcountry recreation on lands adjacent to the Chilkoot Trail. Currently helicopters traverse the Tiaya River valley to provide glacier access in the Haines Block Planning Area. The helicopters can be heard from within the Chilkoot Trail & Dyea National Historic Landmark (NHL). Increased helicopter use during the summer season (May-September) or a route farther upthe Taiya River Valley is incompatible with the current use of the Chilkoot Trail. Foot access to BLM land in this area would be more compatible.

First	Last	Contact Information	Category	Comment
Anne	Matsov	anne_matsov@nps.gov	Visitor Experience	**VISITOR EXPERIENCE:** Mt. Harding The Lynn Canal slope-side of Mt. Harding (from north of the peak, south toward Haines) is the primary scenic view shed from downtown Skagway, with over million visitors a year, and possibly the most viewed BLM land in all of Alaska. Please consider a designation of ACEC (Area of Critical Environmental Concern) for the Mt. Harding area to protect its scenic value with state and national significant qualities that give it special worth.
Anne	Matsov	anne_matsov@nps.gov	Visitor Experience	**CULTURAL RESOURCES**: Dyea The BLM land along the west edge of the Taiya River Valley (C027S059E Sections 33 & 34) is in a known area of activity during the Kiondike Gold Rush and possibly an area of Tlingit use prior to the Gold Rush. Section 34 of this land is within the boundary of the Chilkoot Trail & Dyea National Historic Landmark; although outside the NHL boundary, Section 33 has a high potential to also contain historic and prehistoric sites. Please consider a designation of ACEC for this entire parcel to protect its historic cultural values of national significance as part of the National Historic Landmark. We encourage the BLM to undertake archaeological inventory and monitoring efforts on this land in accordance with Section 110 of the National Historic Preservation Act.
Anne	Matsov	anne_matsov@nps.gov	Cultural Resources	**CULTURAL RESOURCES**: Nourse Glacier There is a high likelihood of Gold Rush era use of the Nourse Glacier area. As a site, accessible by foot, known for goat populations, it is probable that stampeders used the area for hunting and exploration. The area could yield historic archaeology. The lack of BLM archaeological data for this area, does not preclude its existence. Until a time when inventory & monitoring efforts can be undertaken in accordance with Section 110 of the National Historic Preservation Act, please consider an ACEC designation for this area to protect potentially important historic values of national significance.

First	Last	Contact Information	Category	Comment
Anne	Matsov	anne_matsov@nps.gov	Natural Resources	**NATURAL RESOURCES**: Mountain Goats Mountain goats are a culturally significant natural resource for Klondike Gold Rush National Historical Park. They are the only resident ungulate in the park and play a significant role in shaping alpine ecosystems. The stated size of the mountain goat population referenced in BLM planning documents for the Nourse moraine Lake watershed is likely an underestimate. Park staff have recorded up to 14 mountain goats at one time during visual observations in this region. BLM data for this is based on once per year aerial surveys and two collared mountain goats captured during monitoring in the Nourse drainage by Alaska Department of Fish & Game (ADF&G) and BLM. Little is known about specific winter or summer movement patterns or genetic structure of goats in this area. Decisions based on this limited data need to take the larger population size into consideration as well as uncertainty of the range of this cross-border goat group. Please consider the potential impacts on this genetically diverse population of mountain goats from increased recreationaluse, resource development, and helicopter tourism in this area, both during summer and winter seasons.
Anne	Matsov	anne_matsov@nps.gov	Visitor Experience	Mountain goats in the Nourse watershed also range into the Chilkoot Pass area. High use of the Chilkoot Trail (with about 3,500 visitors per year) means that this group of mountain goats is likely one of the most viewed mountain goat populations in the region. They provide a significant ((watchable wildlife" experience for hikers and an important opportunity to provide historically significant cultural context to visitors.
Anne	Matsov	anne_matsov@nps.gov	Natural Resources	**NATURAL RESOURCES**: Geohazards The Nourse River is the largest subwatershed of the Taiya River watershed that flows through Dyea and contributes to story of Klondike Gold Rush National Historical Park. The Nourse drainage also has the largest glaciers contributing to this glacially- fed river. The Nourse Moraine located approximately 22 river miles upstream of Dyea, impounds a large proglacial lake known as Nourse Lake, occupying a surface area of 200 acres. On page 20 of the draft Ring of Fire Record of Decision, Nourse Lake is mentioned as a natural hazard, but dismissed as an insignificant management concern based on the 2009 report, A Geophysical Investigation of Glacial Lake Outburst Potential of Nourse Moraine, Taiya River Watershed, Skagway, Alaska, by Denton, Lewis, and Fisk.
Anne	Matsov	anne_matsov@nps.gov	ACEC	Please consider reviewing this document again. While the 2009 report concluded that that the moraine is stable, the authors also acknowledged that, "*environmental hazards other than a melting ice-core could have adverse effects on the moraine and flood potential, ... includ[ing] liquefaction of earthen material due to violent shaking induced by earthquake events, overtopping of the moraine as proglacial lake water is displaced by a large mass, and wasting events such as catastrophic glacial calving or ice falls of upstream glaciers.*"1

First	Last	Contact Information	Category	Comment
Anne	Matsov	anne_matsov@nps.gov	ACEC	Denton, Lewis, and Fisk also acknowledged that due to various circumstances that impeded thorough field work (ie. poor overflight conditions and malfunctioning equipment), a thorough investigation of the risk potential could not be completed. Please consider a management designation of ACEC for this area to protect human life and safety from natural hazards and include planning for and mitigation of the natural hazard.
Anne	Matsov	anne_matsov@nps.gov	Recreation	Helicopter landings in the North Block (Skagway Area) – currently this is not allowed, and has been awaiting a decision for nearly 10 years. At minimum, I would like to see a similar volume of availability for the North Block, as is currently permitted in the South Block.
Anne	Matsov	anne_matsov@nps.gov	Recreation	Increased helicopter landings in the South Block (Haines Area) for existing heli-ski operators – I believe that a modest increase in helicopter landings would not equate to substantially more use (due to Haines Borough permitting process), and would alleviate congestion and increase safety for heli ski operators with minimum detriment to wildlife or other users. Use is currently300 landings, I would like to see this increase to 1500 (500 for each operator).
Anne	Matsov	anne_matsov@nps.gov	MCA/ Recreation	Change of Goat monitoring & control area in North Block – I would like to see this area adjusted, and perhaps decreased in size, to allow some access for commercial operators on the fringes of this area (close to Haines, and close to Skagway specifically) While I think that the monitoring and control area is an important facet for viability and accuracy of long term wildlife studies, I feel that the area could/should be smaller, thus opening up areas in closer proximity to Skagway and Haines for commercial recreation.
Kip	Kermolan	alaskakip@yahoo.com	ACEC	**ACEC:** We would like the BLM to make the goat Monitor and Control Area an Area of Critical Environmental Concern (ACEC). This would provide the only uncompromised baseline area with regard to helicopter activity, is a critical management tool considering our unique goat populations and warrants being designated and managed as a Research Natural Area. It is essential that we maintain some goat habitat free of helicopter activity to assess impacts and retain the necessary tools to make sound management decision.
Kip	Kermolan	alaskakip@yahoo.com	Wildlife	**Wildlife:** We feel the Alaska Dept of Fish and Game's recently completed extensive research of high used winter goat and bear denning habitat, combined with the Northern Wild Sheep and Goat Council recommendations, provide clear direction to minimize stress, reduce adverse impacts and support sustainable population management and should be adopted as part of any management decision with regard to helicopter activity in the area.

First	Last	Contact Information	Category	Comment
Kip	Kermolan	alaskakip@yahoo.com	MCA	**MCA:** In the interest of population sustainability, and sustaining an adequate means to assess impacts to goats and bears in light of the never ending demands by the heli-skiing industry for more area, it is essential that the Monitor and Control Area be retained in all management alternatives in the upcoming Supplemental Draft Environmental Impact Statement.
Nancy	Waterman	wleighty@ptialaska.net	ACEC	**ACEC:** Please support the current goat Monitor and Control area for an Area of Critical Environmental Concern (ACEC) as shown on map Alternative A. Manage the ACEC as a Research Natural Area (RNA).
Nancy	Waterman	wleighty@ptialaska.net	Wildlife	I support the recent research by ADF&G to map winter mountain goat habitat and bear denning habitat in the Haines area.
Nancy	Waterman	wleighty@ptialaska.net	Wildlife	BLM should adopt mitigation measures recommended by the Northern Wild Sheep and Goat Council and the Alaska Department of Fish and Game to protect mountain goats from adverse impacts of heli-skiing.
Nancy	Waterman	wleighty@ptialaska.net	MCA	I request the Monitor and Control Area be retained in all management alternatives in the upcoming Supplemental Draft Environmental Impact Statement. Keeping one area of goat habitat helicopter-free is of utmost importance.
Nancy	Waterman	wleighty@ptialaska.net	Recreation	I request BLM make a serious effort to monitor for compliance.
Bruce	Baker	bhbaker@gci.net	ACEC	I support Lynn Canal Conservation's nomination of the current goat Monitor and Control area for an Area of Critical Environmental Concern (ACEC) as shown on map Alternative A. I urge you to manage the ACEC as a Research Natural Area (RNA). RNA's are managed to retain the natural features of the ecosystem and can serve as a baseline for future research. This is the only BLM managed goat habitat in the Haines/Skagway area that has been off-limits for helicopter landings and so it is well suited for an ACEC managed as a RNA.
Bruce	Baker	bhbaker@gci.net	Wildlife	I also support the extensive recent research by the Alaska Department of Fish and Game (ADF&G) to map winter mountain goat habitat and bear denning habitat in the Haines area and request that heli-skiing activity not be allowed in high- value habitats.
Bruce	Baker	bhbaker@gci.net	Wildlife	BLM should adopt mitigation measures recommended by the Northern Wild Sheep and Goat Council and ADF&G to protect mountain goats from adverse impacts of heli-skiing.
Bruce	Baker	bhbaker@gci.net	MCA	The Monitor and Control Area should be retained in all management alternatives in the upcoming Supplemental Draft Environmental Impact Statement.

First	Last	Contact Information	Category	Comment
Bruce	Baker	bhbaker@gci.net	Recreation	I ask that BLM respect the 1996 Haines advisory vote against having summer helicopter tours based in Haines
Robert	Caldwell	robert.d.caldwell@gmail.com	Recreation	Helicopter landings in the North Block (Skagway Area) – currently this is not allowed, and has been awaiting a decision for nearly 10 years. At minimum, we would like to see a similar volume of availability for the North Block, as is currently permitted in the South Block.
Robert	Caldwell	robert.d.caldwell@gmail.com	Recreation	Increased helicopter landings in the South Block (Haines Area) for existing heli-ski operators – we believe that a modest increase in helicopter landings would not equate to substantially more use (due to Haines Borough permitting process), and would alleviate congestion and increase safety for heli ski operators with minimum detriment to wildlife or other users. Use is currently 300 landings, would like to see this increase to 1500 (500 for each operator).
Robert	Caldwell	robert.d.caldwell@gmail.com	MCA	Change of Goat monitoring & control area in North Block – we'd like to see this area adjusted, and perhaps decreased in size, to allow some access for commercial operators on the fringes of this area (close to Haines, and close to Skagway specifically) While we think that the monitoring and control area is an important facet for viability and accuracy of long term wildlife studies, we feel that the area could/should be smaller, thus opening up areas in closer proximity to Skagway and Haines for commercial recreation.
Gregg	Rosenkranz	gg.rosenkz@gmail.com	General	I'm writing in support of the Haines helicopter ski industry and specifically in favor of Alternative B. I can't speak to summer helicopter use in the region, but I have been a guided heliskiing client in Haines three times during recent years. From my viewpoint, the Haines heliskiing footprint is small relative to the large surrounding wilderness, with plenty of space for wildlife and heliskiing to coexist.
Gregg	Rosenkranz	gg.rosenkz@gmail.com	General	Heliskiing is limited both temporally and spatially due to the relatively short season, number and location of approved heliports, often inclement weather, avalanche danger, large nearby areas closed to heliskiing, and the highly specialized terrain sought by heliskiers (i.e., steep but rideable northerly facing aspects starting at elevation >5000 ft). Compared to industrial uses and other forms of tourism, heliskiing is low impact land use: it is non-extractive, highly seasonal, attracts a limited number of visitors that have a special appreciation for the mountains, and is challenging enough from a business and logistics standpoint to be commercially self-limiting in size. Note that many of these factors do not pertain to summer helicopter-aided tourism, which I believe should be considered separately, particularly in terms of caps on the number of helicopter landings on BLM land.

First	Last	Contact Information	Category	Comment
Gregg	Rosenkranz	gg.rosenkz@gmail.com	Noise	Yes, there is noise involved with heliskiing and aircraft use in general. I live in Kodiak, not far from a Coast Guard Air Station which is home to numerous rescue/patrol helicopters and fixed wing aircraft. We hear them frequently as do the local deer, bear, and mountain goat populations, all of which seem well adapted to the noise. We see our world-famous Kodiak brown bears in close proximity to the airport when salmon are in the nearby Buskin River, and I have viewed these species many times from both helicopters and fixed wing aircraft in Kodiak and other parts of Alaska. In short, if folks oppose heliskiing due to noise or other concerns, let them argue those points rather than pointing to a hypothesized detrimental effect on wildlife as an excuse for their opposition. Both aircraft and wildlife are found broadly across Alaska.
Gregg	Rosenkranz	gg.rosenkz@gmail.com	ACEC	As a retired ADFG biometrician, I do not support designation of the area between Lynn Canal and the Canadian border as an ACEC or special research area. As stated in the ROF DEIS (pg. 21), surveys conducted by ADFG led to the conclusion that this area is not fragile, vulnerable, or unique compared to surrounding areas. Basically, there is a lot of mountain goat habitat in this part of Alaska and Canada and no conservation concern regarding the species. Cost of wildlife research in Alaska is high, and logistics would be especially difficult and expensive in the proposed Monitor and Control Area (see Amendment D map) due to remoteness, extremely rugged terrain, and lack of support infrastructure (employees, offices, vehicles, aircraft) located in the vicinity.
Gregg	Rosenkranz	gg.rosenkz@gmail.com	Economics	The sport of heliskiing brings an interesting international mix of and workers and visitors to the Haines area without use of cruise ships. It has not created an economic boom but has added economic activity to the community during a season when not a lot else is going on. A small but dedicated group of professional athletes, photographers, and videographers have been promoting the industry over the past few years and have succeeded in putting Haines 'on the map' for skiers and snowboarders worldwide. Haines heliskiing is a special activity in a special place that merits further development rather than further restrictive regulations.
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	I am writing to provide insight regarding the genetic uniqueness of mountain goats in southeast Alaska, in particular the Haines/Skagway area. I am also writing to raise awareness with respect to resource development and helicopter traffic on mountain goats. I have a PhD in evolutionary biology and have studied mountain goat genetics for over a decade. I am currently Assistant Professor and have multiple graduate students studying mountain goats in British Columbia and Alaska. I have published numerous peer-reviewed articles on mountain goats, including analyses of data collected in the Haines and upper Lynn Canal areas (Shafer et al. 2011a, Shafer et al. 2011b, Shafer et al. 2012a, Shafer et al. 2012b).

First	Last	Contact Information	Category	Comment
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	Mountain goats in Haines/Skagway area genetically unique and harbour the descendants of a refugial population that survived the last glaciation in southeast Alaska (Shafer et al. 2011a). Genetic diversity distinctly emanates from the Haines/Skagway area, meaning these are among the most diverse mountain goat populations on the planet. Part of this diversity is reflected in high degrees of substructure or unique "populations." For example, the average level of genetic differentiation (known as F_{ST}) between management units in all of southeast Alaska is 12%: in the Haines area, the average genetic distance between geogragically adjacent herds is ~3.5% (see below). To put this value in perspective, the average difference across the entire range of Dall and Stone sheep is 16% (Worley et al. 2004). Ultimately, this implies a relatively low demographic exchange despite the small area (see Fig. 1). The key point is that my genetic data suggest the Ring of Fire region has numerous genetically discrete mountain goat herds.
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	The refugial origin and differentiation of Haines area mountain goats is important in a couple regards. First, based on the scientific literature, refugial populations typically harbour disproportionate amounts of genetic diversity and unique adaptations. This is particularly relevant for a species' ability to cope with future change (i.e. climate or anthropogenic), and the overall genetic integrity of a species
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	Secondly, the level of differentiation seen among the herds in the Haines area is suggestive of local adaptation. If populations are adapted to their local environment, they may not be able to disperse and thrive elsewhere and may be overly sensitive to disturbance. Maintaining genetic diversity is key for a species ability to cope with future environmental change. Thus, the precautionary principle is warranted when it comes to the impact of development. Below are the most up-to-date genetic analyses of mountain goats in this area from almost
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	300 individuals (Figure 1; 2a). The first values, or % difference, show clear subdivisions that correspond to the Chilkat River among other features. Thus multiple populations exist, and hence diversity is high, in this region.

First	Last	Contact Information	Category	Comment
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	My second concern relates to the potential for increased development and aerial traffic. We simply do not know what effect additional helicopter activity will have on mountain goats, and available data suggest the consequences could be negative. Given their life-history characteristics (i.e. late-age of reproduction, frequent reproductive pauses), we know that populations can take a very long time to recover (Festa-Bianchet & Cote 2007). Thus, precautions should be made to limit helicopter disturbance (Côté 1996). Research in Alberta led to the recommendation of a 1.5 km no fly-zone around known mountain goat habitat (Côté 1996; Côté et al. 2013): importantly, mountain goat biologists and managers adopted a similar resolution (NWGSC 2004).
Aaron	Shafer	aaronshafer@trentu.ca	Wildlife	In conclusion, I hope the BLM factors the mountain goats of the region in their decision-making, especially in light of their unique genetic heritage and their susceptibility to disturbance.
Thom	Ely	akthome@yahoo.com	ACEC	I support Map Alternative A with the designation of the Mountain Goat Monitor and Control Area as an Area of Critical Environmental Concern. This designation allows for special management attention to protect our genetically unique mountain goat resource in this area. I request that the ACEC be managed as a Research Natural Area (RNA). RNA's are managed to retain the natural features of the ecosystem and can serve as a baseline for future research. This is the only BLM managed goat habitat in the Haines/Skagway area that has been off- limits for helicopter landings and so it is well suited for an ACEC managed as a RNA. Please include the Monitor and Control Area in the management alternatives in the upcoming Supplemental Draft Environmental Impact Statement.
Thom	Ely	akthome@yahoo.com	General	The recreational helicopter industry has ample access on most of the BLM managed lands within our Borough. It is extremely important to maintain some helicopter free areas that will never be impacted by these aircraft. The ability of a helicopter to fly and land almost anywhere sets it apart from other machines. I ask that you continue to honor the 1996 Haines Borough advisory vote against summer helicopter tours operating out of Haines.
Thom	Ely	akthome@yahoo.com		I request that BLM work cooperatively with the Haines Borough to manage winter heliskiing by keeping areas in prime wildlife habitat, as researched and documented by ADF&G and areas used by other backcountry recreationists, out of bounds. Substantial public time and resources have gone into the effort to compromise with the industry on where they should go. Work still needs to be done to get some businesses to comply and follow the rules. A local business recently got off probation with the BLM for using lands illegally for heliskiing. I ask that you make a serious effort to monitor for compliance.

First	Last	Contact Information	Category	Comment
Thom	Ely	akthome@yahoo.com	Wildlife	BLM should adopt mitigation measures recommended by the Northern Wild Sheep and Goat Council and the Alaska Department of Fish and Game to protect mountain goats from adverse impacts of helicopter flightseeing and recreation. The allotted helicopter landings should reflect actual use trends rather than unrealistic industry requests.
Andy	Hughes	andyhughesusa@hotmail.com	ACEC	I understand that BLM is considering an amendment to its 2008 Ring of Fire Land Management Plan to place an "Area of Critical Environmental Concern" (ACEC) over State-selected mining and recreation lands in Haines. These include lands classified and set aside as a mineral district in the Haines Borough Comprehensive Land Use Plan. BLM's 2012 Draft Plan Amendment/DEIS analyzed the criteria for ACEC designation and concluded that the Haines Planning Area does not warrant designation as an ACEC. The BLM's regulations are sufficient to protect other resources and mitigate impacts from multiple use activities such as mining and recreation. BLM's 2012 draft Plan is consistent with local land use plans and current mining development. Nothing has changed.
Andy	Hughes	andyhughesusa@hotmail.com	ACEC	I oppose the amendment designating an ACEC within the Haines Borough inconsistent with local land use plans proposed by interests opposed to mining development in the area.
Bill	Corbus	bill.corbus@gmail.com	General	I oppose the proposed amendment to the 2008 Ring of Fire Land Management Plan because
Bill	Corbus	bill.corbus@gmail.com	3809 Regulations	(1) BLM 3809 regs are sufficient to allow development and protect other resources
Bill	Corbus	bill.corbus@gmail.com	ACEC	(2) nothing has changed since BLM's 2012 determination that ACEC not needed
Bill	Corbus	bill.corbus@gmail.com	ACEC	(3) BLM needs to consider the impacts of any restrictive land use designations, particularly ACECs on surrounding State land including SOA Mental health land
Bill	Corbus	bill.corbus@gmail.com	Other Jurisdictions	(4) BLM needs to consider the integrity of the Haines. Consensus agreement re Bald Eagle Reserve
Bill	Corbus	bill.corbus@gmail.com	ACEC	(5) and BLM needs to be careful that ACEC issue is not simply an effort to prevent mining and recreation.

First	Last	Contact Information	Category	Comment
Caroline	Van Hemert	Caro_van@yahoo.com	ACEC	I am writing to express support for the nomination of the current goat Monitor and Control area for an Area of Critical Environmental Concern (ACEC) as shown on map alternative A in Lynn Canal. Specifically, I would like to see the ACEC be managed as a Research Natural Area (RNA). Additionally, although I am not opposed to heli-skiing, I request that heli-skiing activity not be allowed in high value goat habitats as recently identified by ADF&G (although additional research may be needed to establish such habitats). I also suggest that BLM adopt mitigation measures recommended by the Northern Wild Sheep and Goat Council and the Alaska Department of Fish and Game to protect mountain goats from adverse impacts of heli-skiing and retain the Monitor and Control Area in all management alternatives in the upcoming Supplemental Draft Environmental Impact Statement. Finally, I strongly ask BLM to respect the 1996 Haines advisory vote against having summer helicopter tours based in Haines.
Furbish	Klensch	snowshoes@aptalaska.net	Economics	I want to support management of BLM lands in the Skagway and Haines boroughs so that our resources are protected and conserved for the benefit of our economy and our quality of life. Tourism is our prime economy, and tourism depends uponpreserving the landscapes, wildlife and natural facets of our area that make us a desired and unique destination.
Furbish	Klensch	snowshoes@aptalaska.net	General	Please manage commercial enterprises so that they do not degrade the view sheds, natural soundscape, wildlife habitat and recreational opportunities. As much as possible, base these management decisions on scientific data and the goal of preserving the resources for future use, rather than allowing quick profits to degrade the resource in the short term.
Gerald	Lapp	jlapp49@icloud.com	ACEC	To Bruce Loranger: Hi Bruce my name is Jerry Lapp and I am a 45 year resident of the Haines area. I would just like to make a statement that I am opposed to the suggestion of an ACEC. Just for clarification nothing has changed since BLM,s determination that ACEC was not needed and in my opinion the regulations we now have in place are sufficient to allow development and protect our other resources. So I am asking the BL M not to put more restrictions on our community. We need the jobs industry can supply and still take care of our natural resources. Thank You. Jerry Lapp Former Haines Borough Mayor.
Gina	Erny	mrserny60@aptalaska.net	General	I oppose the BLM Ring of Fire Management Amendment Plan. NO to monitoring and control areas for wildlife studies and no to establishing a maximum number of annual helicopter landings on BLM-managed public lands. No to resource studies.

First	Last	Contact Information	Category	Comment
Jason	Custer	jason.c@aptalaska.net	eneral	For over 60 years, Alaska Power & Telephone (AP&T) has provided diverse utility services throughout southeast Alaska, including within the community of Haines. AP&T is an employee and investor-owned company, which takes risk and invests private capital to develop, operate, and maintain utility infrastructure for the benefit of families and businesses in our service areas. The economic well-being of the communities we serve is essential to our longevity as a business, and our ability to recover our investment in community infrastructure.
Jason	Custer	jason.c@aptalaska.net	ACEC	AP&T is writing to oppose any amendment to the 2008 Ring of Fire Land Management Plan which would potentially impose an "Area of Critical Environmental Concern" land use designation over State-selected mining and recreation lands in Haines.
Jason	Custer	jason.c@aptalaska.net	Other Jurisdictions	If the BLM is considering imposing a land use designation of this type, it must fully consider the potential impacts on surrounding State lands, including State lands administered by the Alaska Mental Health Trust Authority to generate financial and programmatic support for its beneficiaries, who suffer from various disabilities. It must also consider the impacts upon the community, including upon current and future family-wage jobs within industries such as tourism and mining.
Jason	Custer	jason.c@aptalaska.net	3809 regulations	AP&T is aware that in its 2012 Draft Plan Amendment / DEIS, the BLM analyzed the criteria for ACEC designation and concluded that applying this designation to the Haines Planning Area is not warranted. Since that time, nothing has changed. Existing BLM 3809 regulations sufficiently protect resources and mitigate impacts from multiple use activities such as mining and recreation. The BLM should fully consider the impacts of ACEC's on the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents which established the Chilkat Bald Eagle Preserve, and the Haines State Forest. Moreover, the BLM should take care that the issue of the ACEC is not simply an effort to leverage the BLM's planning processes to prevent mining and recreation.

First	Last	Contact Information	Category	Comment
Jason	Custer	jason.c@aptalaska.net	Cumulative Impact	The communities which AP&T serves in Southeast Alaska are surrounded by land which is predominantly under federal ownership and control. Federal land management practices such as the Tongass Land Management Plan, the creation of National Monuments, and the imposition of the Roadless Rule severely restrict access to land for natural resource development, and even access to clean, renewable energy in the communities we serve. The cumulative impact of additional federal land use restrictions and withdraws threatens the long-term sustainability of the communities AP&T serves, and by extension, our ability to recover our investment, and invest in development of new renewable energy resources. ACEC designation would add yet another element of restriction upon lands not even owned by the federal government. A designation of this type may serve as a form of withdraw which violates "no future withdraws" provisions of ANILCA.
Paul	Erny	erny60@aptalaska.net	General	Please do not approve the request for consideration by LCC regarding the ring of fire land use amendment. This is simply another ploy by this narrow minded organization to continue to limit public lands from public use. This "I'm here, shut the door" approach is a selfish approach to limit growth. Growth that this community needs.
Jim	Weber	reischl1950@hotmail.com	ACEC	I am registering my opposition to an ACEC. My opposition is based on:
Jim	Weber	reischl1950@hotmail.com	3809 Regulations	1) BLM 3809 regulations are sufficient to allow development and protect other resources;
Jim	Weber	reischl1950@hotmail.com	ACEC	2) nothing has changed since BLM's 2012 determination that ACEC not needed;
Jim	Weber	reischl1950@hotmail.com	Other Jurisdictions	3) BLM needs to consider the impacts of any restrictive land use designations, particularly ACECs, on the surrounding State land, including that held by the AMHT;
Jim	Weber	reischl1950@hotmail.com	Other Jurisdictions	4) BLM needs to consider the impacts of ACECs, on the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle Preserve and the Haines State Forest; and
Jim	Weber	reischl1950@hotmail.com	ACEC	5) BLM needs to be careful that the ACEC issue is not simply an effort to prevent mining and recreation.
Karen	Hess	karenhess32@gmail.com	General	I strongly oppose the BLM Amendment proposal regarding helicopter's in critical habitat for goats in the Haines area. There are several reasons why I oppose this request by LCC, here are just a few.
Karen	Hess	karenhess32@gmail.com	3809 Regulations	1) BLM 3809 regulations are sufficient to allow development and protect other resources
Karen	Hess	karenhess32@gmail.com	ACEC	2) BLM's 2012 determination that ACEC was not needed, has anything changed to reverse that decision?
Karen	Hess	karenhess32@gmail.com	Other Jurisdictions	3) BLM needs to consider the impacts of ACEC on the integrity of the 1982 consensus agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle Preserve and the Haines State Forest.

First	Last	Contact Information	Category	Comment
Karen	Hess	karenhess32@gmail.com	General	I would urge BLM to be very cautious of the request from LCC that it is not simply an effort to prevent mining and helicopter recreation.
Karen	Hess	karenhess32@gmail.com	General	LCC has opposed mining and helicopter activity at every meeting and avenue they can find. I feel that this is just another avenue for them to shut down helicopter activity and mining.
Liz	Cornejo	liz@constantinemetals.com	General	Please accept the attached comments on the Ring of Fire Haines Block Amendment on behalf of Constantine Mining LLC.
Liz	Cornejo	liz@constantinemetals.com	General	Please accept these written comments regarding the Ring of Fire Draft Management Area.
Liz	Cornejo	liz@constantinemetals.com	General	Our comments address several questions identified by the Bureau of Land Management (BLM), including:
Liz	Cornejo	liz@constantinemetals.com	Land Use Designation	1) Whether to retain or change the Special Recreation Management Area (SRMA) designation,
Liz	Cornejo	liz@constantinemetals.com	Land Use Designation	2) Whether any part of the Planning Area meets the criteria for an Area of Critical Environmental Concern (ACEC) designation,
Liz	Cornejo	liz@constantinemetals.com	Land Use Designation	3) Whether to retain a Monitor and Control Area for wildlife studies,
Liz	Cornejo	liz@constantinemetals.com	Wildlife	4) Whether the modified (current) Required Operating Procedure (ROP) #16 is appropriate, and
Liz	Cornejo	liz@constantinemetals.com	Recreation	5) Whether to establish a maximum number of annual helicopter landings on these BLM-managed public lands.
Liz	Cornejo	liz@constantinemetals.com	3809 Regulations	In answering the questions identified by the BLM, and in deciding whether to propose ACECs in the Planning Area, the BLM should explain why its regulations (43 C.F.R. § 3809), written to prevent the "unnecessary or undue degradation of the lands" (Federal Land Management Policy Act 43 U.S.C § 1732 (b)), are either sufficient or insufficient to manage and mitigate the impacts of mining and other activities in the Planning Area.
Liz	Cornejo	liz@constantinemetals.com	ACEC	In addition, the BLM should carefully determine whether the Planning Area, or any part of it currently meets the criteria of 43 U.S.C. § 1610.7-2 "Designation of areas of critical environmental concern." This regulation states:
Liz	Cornejo	liz@constantinemetals.com	ACEC	Areas having potential for Areas of Critical Environmental Concern (ACEC) designation and protection management shall be identified and considered throughout the resource management planning process (see §§ 1610.4-1 through 1610.4-9).
Liz	Cornejo	liz@constantinemetals.com	ACEC	(a) The inventory data shall be analyzed to determine whether there are areas containing resources, values, systems or processes or hazards eligible for further consideration for designation as an ACEC. In order to be a potential ACEC, both of the following criteria shall be met:
Liz	Cornejo	liz@constantinemetals.com	ACEC	(1) Relevance. There shall be present a significant historic, cultural, or scenic value; a fish or wildlife resource or other natural system or process; or natural hazard.

First	Last	Contact Information	Category	Comment
Liz	Cornejo	liz@constantinemetals.com	ACEC	(2) Importance. The above described value, resource, system, process, or hazard shall have substantial significance and values. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. A natural hazard can be important if it is a significant threat to human life or property.
Liz	Cornejo	liz@constantinemetals.com	ACEC	If it so determines, BLM needs to explain what has changed. In the 2012 Draft RMP Amendment/DEIS BLM did analyze the criteria requirements for ACEC designation and correctly concluded that the Haines Planning Area does not warrant designation as an ACEC, largely because "the ecosystem does not have more than locally significant qualities. The wildlife resources and natural processes in the Planning Area are typical of all of Southeast Alaska and are not unique to the mountainous regions of southeast Alaska. There is nothing about the bald eagle or mountain goat populations or habitat in the Planning Area that is distinct from the surrounding areas. Mountain goat populations are widely dispersed across the region on all land ownerships and have remained stable over time. Habitat conductivity remains intact, and subpopulations of goats are not isolated. Additionally, based on counts conducted by the ADFG of overall number of goats, percent of kids, and the number of goats seen per hour, the goat population on State lands in the project area is healthy (Scott, 2008). Furthermore, required operating procedures and stipulations to protect wildlife are still in effect, and since the population is stable, no special management attention is currently required to protect the mountain goat population in the project area."
Liz	Cornejo	liz@constantinemetals.com	Wildlife	No new information, including a recent Alaska Department of Fish and Game (ADFG) report and Resource Selection Model (RSF) by White and Gregovich (2018), provide any data that indicate that wildlife resource populations are not stable, or that the habitat is no longer intact or that goat populations are now isolated in the area. Thus, there is insufficient data to support a change in BLM's 2012 findings. Likewise, there is insufficient data to support a "relevance or importance" determination to support an ACEC designation.

First	Last	Contact Information	Category	Comment
Liz	Cornejo	liz@constantinemetals.com	Wildlife	Constantine herein presents new survey data and analysis (Hemmera, 2018, attached) of mountain goat distribution, abundance and movement of populations near the Palmer Exploration Project, located in the Haines Block Planning Area. An analysis of habitat use (based on direct observation of goats from surveys) compared to winter habitat availability as predicted by the ADFG winter Resource Selection Function (RSF) model was also conducted. Actual habitat use at a local scale can vary substantially from model predictions due to several factors. For example, snow depth, which is not a variable in the model, may preclude mountain goats from using an area that otherwise has suitable winter habitat characteristics. Our data suggest the model may be biased to errors of omission (i.e. failing to fully identify and categorize suitable habitat where it occurs) and include apparent commission errors (i.e. falsely classifying areas as suitable) in the Tsirku-Klehini Block (Figure 1). Therefore, all reference to RSF model habitat in the Ring of Fire Management Plan and EIS should be described as 'potential' habitat. The analysis by Hemmera is based the 2006 ADFG RSF model. The 2018 ADFG RSF model has not been made available to the public in digital format suitable to allow comparable analytics; however, a paper map version was reviewed and the differences in the two RSF models in the Tsirku-Klehini Block are not material enough to alter the conclusions of the Hemmera report. We recommend additional refinement of ADFG's RSF model and, fornow, consider it a notable academic study, but not one that should be a primary driver of goat management strategies in the Haines Block.
Liz	Cornejo	liz@constantinemetals.com	Land Use Designation	Regarding whether to retain, eliminate, or expand the SRMA designation in the Planning Area, we understand that the SRMA was originally created (2008 ROD) as an interim step while BLM generated additional data (i.e. for goats) that could inform future decisions about the merits of future permanent land use designations including Areas of Critical Environmental Concern. With the BLM's 2012 Plan Amendment conclusion that the area does not qualify to be designated as an ACEC and no new information that would change BLM's 2012 findings or support a relevance or importance finding needed to designate an ACEC, there is no longer the need for the SRMA designation. In addition, the BLM has a list of policy and regulatory tools at its disposal to manage the Haines Block resources without needing to designate it, or any portion of it, as an SMRA or an ACEC.

First	Last	Contact Information	Category	Comment
Liz	Cornejo	liz@constantinemetals.com	Wildlife	We support further study of goats and other wildlife species in the Haines Block. In this regard, we support Alternatives which would retain the 98,000-acre Monitoring and Control Area for a period of five years from the signing of the ROD for the EIS to provide a control area for mountain goat and other wildlife studies conducted jointly between the BLM and ADFG. After the five-year period expires, the Monitoring and Control Area would be lifted, and permit applications would be accepted for review through site-specific NEPA prior to any new authorizations. Future landing authorizations would be contingent on the results of the study efforts.
Liz	Cornejo	liz@constantinemetals.com	Wildlife	The modified (current) version of ROP #16 as written in the 2012 draft Amendment, would manage activities based on predicted habitat, not actual goat observations, and would unnecessarily preclude helicopter landings in nearly every portion of the Haines Block (Figure 2). In the absence of new data to indicate existing active management flight buffers to observed goats are not effective (i.e. populations are not stable), and due to the limitations and errors identified in the ADFG RSF model to accurately predict goat habitat and use in the Tsirku-Klehini Block, we do not support the modified (current) version of ROP #16 for any area of the Haines Block.
Liz	Cornejo	liz@constantinemetals.com	Recreation	We support increasing the number of combined winter and summer recreational helicopter landings. Related to helicopter landings, we found no mention of how, or if, any restrictions on the numbers of helicopter landings proposed in the plan would apply to non-recreational uses, including mining. It is our understanding, based on communications with BLM planning staff, that the maximum number of landings proposed in the draft plan would apply only to recreation/Special Recreation Permit (SRP) related landings. The Plan Amendment should clearly state that there will be no limit on the number of non-recreational helicopter landings, including for mining, in the Haines Block.
Liz	Cornejo	liz@constantinemetals.com	General	In conclusion, we support Alternative D (no ACEC or SMRA), retention of the Monitoring and Control Area for five years, an increase in recreational helicopter landings, and rewording of ROP #16.
Nancy	Berland	nancyandburl@gmail.com	ACEC	I've lived in both Skagway and more recently in Haines since 1979, and witnessed the advent of heli-tourism in both communities. I've read every Environmental Assessment and Environmental Impact Statement on this subject for the Juneau, Haines and Skagway area. I've also read studies on mountain goats and helicopters. Past BLM documents have acknowledged goats are susceptible to disturbance from helicopters - a resource which is both "sensitive" and "vulnerable". Scientific concerns include displacement from prime habitat, and reduced foraging efficiency resulting in nutritional deficiency, reproductive failure, and increased vulnerability to predation. All reasons to request a management strategy that protects at least some of our goat populations from helicopter activity, and hence the need to create an Area of Critical Environmental Concern (ACEC).

First	Last	Contact Information	Category	Comment
Nancy	Berland	nancyandburl@gmail.com	Wildlife	A substantial amount of new information has come to light since the Ring of Fire process was put on hold. BLM is required by the National Environmental Protection Act to evaluate this new information. Of prime importance are studies published by Dr. Aaron Shafer in 2011 and 2012, and Alaska Department of Fish and Game this year. These studies should be reviewed in the Supplemental DEIS.
Nancy	Berland	nancyandburl@gmail.com	Wildlife ACEC	After 10 years of data gathering, Shafer was able to determine Haines Block goat herds are "genetically discrete" and "unique among Alaska and indeed species range." (See Shafer published studies and his BLM comments of 2/10/13). In his letter requesting BLM create an ACEC, Shafer stated Haines goats are "a distinctive and irreplaceable source of biodiversity" that is "essential for maintaining species diversity." (Id.).
Nancy	Berland	nancyandburl@gmail.com	ACEC	I strongly support making the current Monitoring and Control Area an ACEC, managed as a RNA. It's time for BLM to acknowledge our genetically unique goat resource and choose a management strategy that will enable the further study and protection of this "irreplaceable source of biodiversity."
Nancy	Berland	nancyandburl@gmail.com	ACEC	Every alternative created for the Supplemental DEIS should prohibit helicopter landings in the current Monitoring and Control Area in order to preserve the only goat habitat in the Haines Block that has had no helicopter landings. This "control" is essential in order to provide the "optimal" management strategy that protects goats from impacts of helicopter recreation, as recommended by ADFG. (See *ADFG Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management*, White and Gregovich, 2018, page 20).
Nancy	Berland	nancyandburl@gmail.com	Wildlife	Further, recent ADFG studies locating bear and goat habitat should be used to prohibit helicopter landings in prime bear denning, and winter goat habitats.
Nancy	Berland	nancyandburl@gmail.com	General	Lastly: 1) Please adopt the Northern Wild Sheep and Goat Council recommended goat avoidance mitigation, 2) Cap helicopter landings at realisic levels based on recent past use - rather than the inflated levels used in the 2012 DEIS, and 3) Monitor for compliance.
Neil	MacKinnon	Neil@alaskalaundry.com	Land Use Designation, 3809 Regulations	I am opposed to amendment of the BLM 2008 Ring of Fire Land Management Plan that would place an Area of Critical Environmental Concern over lands in the Haines area. Nothing has changed since the 2012 determination that an ACEC was not warranted for this area and that existing BLM 3809 regulations are sufficient of protect other resources from activities in the planning area.
Neil	MacKinnon	Neil@alaskalaundry.com	General	This looks like an attempt to stop any mining and other helicopter uses in the area.

First	Last	Contact Information	Category	Comment
Neil	MacKinnon	Neil@alaskalaundry.com	Land Use Designation	Also because of the nature of an ACEC it will effect development and use of State and State Mental Health Lands by their proximity to the ACEC. This must be considered.
Neil	MacKinnon	Neil@alaskalaundry.com	Land Use Designation	Again I am opposed to an ACEC designation for the Haines area in the Ring of Fire Land Management Plan
PeggyAnn	McConnochie	peggyann@gci.net	Land Use Designation	We understand that BLM is considering an amendment to its 2008 Ring of Fire Land Management Plan that would potentially place an "Area of Critical Environmental Concern" over State-selected mining and recreation lands in Haines. Your 2012 Draft Plan Amendment/DEIS BLM analyzed the criteria for ACEC designation and concluded that the Haines Planning Area does not warrant designation as an ACEC. Nothing has changed! The BLM's regulations are indeed sufficient to protect other resources and mitigate impacts from multiple use activities such as mining and recreation.
PeggyAnn	McConnochie	peggyann@gci.net	Land Use Designation	We oppose the amendment designating an ACEC in the Haines Block Planning Area.
Roger	Schnabel	Roger@seroad.com	ACEC	It has come to my attention that the BLM is considering changes to the 2012 Ring of Fire Management Plan that would potentially place an Area of Critical Environmental Concern (ACEC) over state-selected mining and recreation lands in Haines.
Roger	Schnabel	Roger@seroad.com	ACEC	I am against this change and oppose the designation of imposing an ACEC for the area.
Roger	Schnabel	Roger@seroad.com	wildlife	As a lifelong resident observing goats and an avid Goat Hunter in my younger years I can confirm Goats are indeed an astute, judicious, intelligent, cagy animal. It's not just my hunting and numerous unsuccessful hunts that I am using as myconfirmation.
Roger	Schnabel	Roger@seroad.com	wildlife	I live a 4.8 mile Haines Highway and with my scope on my window next to my deskI continually observe goats on Tukgahgo from 7 mile to the 3 mile along the Takshanuk Ridge. The Haines Airport is at 3.8 mile, which accommodates two heli-pads with ongoing airplane/chopper traffic on a daily basis year around. Helicopters run in the winter from this port, managing heli-skiers as well as maintaining towers on Ripinski, part of the same ridge behind my house.
Roger	Schnabel	Roger@seroad.com	wildlife	My son at the age of 10, became a trapper which lasted three years. One trap line took us behind our house headed towards town on a ridge, where we were confronted by goats wintering in the timber west of our home within less than 0.5 miles from the airport and heli-pad. This was a site chosen by them in spite of the heli and plane traffic and what I would think was annoying trappers and wonder why.
Roger	Schnabel	Roger@seroad.com	wildlife	My experience and observations note planes, helicopters, trappers, and recreationists are not the problem: I am convinced bears and avalanches cause them the biggest threat in my area.

First	Last	Contact Information	Category	Comment
Roger	Schnabel	Roger@seroad.com	wildlife	Visit us in April as the snow melts. – With snow heavy on the mountain, inaccessible by any living animal other than birds and possibly mice, you can observe the goats following the melt up the mountain at 4.5 mile planes and helicopters are raging around them less than 0.5 miles away, yet they continue to use the area.
Roger	Schnabel	Roger@seroad.com	wildlife	To assume good goat habitat is prevalent and therefore curtail or condemn activity for recreationalists, helicopters or miners appears to be a move based upon a public uprising without cause or proper research.
Roger	Schnabel	Roger@seroad.com	General	Why restrict these things we enjoy and need to make a living.
Roger	Schnabel	Roger@seroad.com	General	At some point the bureaucracy will not and cannot be funded.
Scott	Spickler	sspickler@gmail.com	Land Use Designation	I understand that BLM is considering an amendment to its 2008 Ring of Fire Land Management Plan that would potentially place an "Area of Critical Environmental Concern" over State-selected mining and recreation lands in Haines. Your 2012 Draft Plan Amendment/DEIS BLM analyzed the criteria for ACEC designation and concluded that the Haines Planning Area does not warrant designation as an ACEC. Nothing has changed! The BLM's regulations are indeed sufficient to protect other resources and mitigate impacts from multiple use activities such as mining and recreation.
Scott	Spickler	sspickler@gmail.com	ACEC	I oppose the amendment designating an ACEC in the Haines Block Planning Area.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	General	The Alaska Miners Association (AMA) writes to provide comments in support of Alternative D on the Ring of Fire Draft Management Plan Amendment/Draft Environmental Impact Statement for the Haines Block Planning Area.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	General	AMA is a professional membership trade organization established in 1939 to represent the mining industry in Alaska. We are composed of more than 1,400 members that come from eight statewide branches: Anchorage, Denali, Fairbanks, Haines, Juneau, Kenai, Ketchikan/Prince of Wales, and Nome. Our members include individual prospectors, geologists, engineers, suction dredge miners, small family mines, junior mining companies, and major mining companies, Alaska Native Corporations, and the contracting sector that supports Alaska's mining industry.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	General	In its request for comments, BLM outlined decisions to be made in this amendment and DEIS. AMA's comments are focused on these questions and decisions:
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Land Use Designation	Decision 1: Whether to retain, eliminate, or expand the Special Recreation Management Area (SRMA) designation in the Planning Area.

First	Last	Contact Information	Category	Comment
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Land Use Designation	AMA understands that the SRMA was originally created in 2008 as an interim step so that BLM could obtain additional data that could inform future decisions about land use designations including Areas of Critical Environmental Concern. The 2012 Plan Amendment concluded that the area does not qualify to be designated as an ACEC, and there is no new information that would change BLM's 2012 findings or support a finding needed to designate an ACEC, there is also no longer a need for the SRMA designation. In addition, the BLM has a list of policy and regulatory tools at its disposal to manage the Haines Block resources without needing to designate it, or any portion of it, as an SMRA.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	Decision 2: Whether any part of the Planning Area meets the criteria for an Area of Critical Environmental Concern (ACEC) designation.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	In deciding whether to propose ACECs in the Planning Area, the BLM must evaluate and then adequately explain why its regulations (43 C.F.R. § 3809), written to prevent the "unnecessary or undue degradation of the lands" per the Federal Land Management Policy Act (FLPMA) are either sufficient or insufficient to manage and mitigate the impacts of mining and other activities in the Planning Area. ACECs are frequently s of the public, immediately within or adjacent to areas in which there is development potential. FLPMA provides our agencies with a s of the public, immediately within or adjacent to areas in which there is development potential. FLPMA provides our agencies with a multiple-use mandate that agencies must take into consideration, along with dozens of other environmental laws and regulations. It is the position of AMA that ACECs are most often duplicative and unnecessary with the multiple protections provided by these requirements.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	In addition, the BLM should carefully determine whether the Planning Area, or any part of it currently meets the outlined criteria for ACECs "Designation of areas of critical environmental concern." BLM's regulation outlining criteria states: *Areas having potential for Areas of Critical Environmental Concern (ACEC) designation and protection management shall be identified and considered throughout the resource management planning process.*
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	(a) The inventory data shall be analyzed to determine whether there are areas containing resources, values, systems or processes or hazards eligible for further consideration for designation as an ACEC. In order to be a potential ACEC, both of the following criteria shall be met:
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	(b) Relevance. There shall be present a significant historic, cultural, or scenic value; a fish or wildlife resource or other natural system or process; or natural hazard.

First	Last	Contact Information	Category	Comment
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	(c) Importance. The above described value, resource, system, process, or hazard shall have substantial significance and values. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. A natural hazard can be important if it is a t threat to human life or property.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	ACEC	If BLM determines designation of an ACEC is appropriate and necessary, it must explain what has changed since the 2012 Draft RMP Amendment/DEIS BLM in which ACEC criteria requirements were analyzed and correctly concluded that the area does not warrant ACEC designations, due to healthy wildlife populations.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Land Use Designation	Decision 3: Whether to retain the Monitoring and Control Area for wildlife studies.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Land Use Designation	We support any further study of goats and other wildlife species in the Haines Block in that it helps BLM to fully understand their health, distribution, and other factors. In this regard, we support Alternatives which would retain the 98,000-acre Monitoring and Control Area for a period of five years from the signing of the ROD for the EIS to provide a control area for mountain goat and other wildlife studies conducted jointly between the BLM and ADFG. After the five-year period expires, the Monitoring and Control Area would be lifted, and permit applications would be accepted for review through site-specific NEPA prior to any new authorizations. Future landing authorizations would be contingent on the results of the study efforts.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Land Use Designation	Further, the Monitoring and Control Area proposed to be designated as an ACEC is State-selected land adjacent to Alaska Mental Health Trust Land with known mineral potential and prospects. Exploration and development of this area will be done in accordance with dozens of federal, state, and local laws and regulations, and tailor-made permit stipulations that consider unique and effective environmental protection measures rather than closing land to development.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Recreation	Decision 4: Establish a maximum number of authorized annual helicopter landings.

First	Last	Contact Information	Category	Comment
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Recreation	The modified (current) version of ROP #16 as written in the 2012 draft Amendment, would manage activities based on predicted habitat, not actual goat study and data, and would unnecessarily preclude helicopter landings in nearly every portion of the Haines Block (Figure 2). In the absence of new data to indicate existing active management flight buffers to observed goats are not effective (i.e. populations are not stable), and due to the limitations and errors identified in the ADFG RSF model to accurately predict goat habitat and use in the Tsirku-Klehini Block, we do not support the modified (current) version of ROP #16 for any area of the Haines Block.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	Recreation	We support increasing the number of combined winter and summer recreational helicopter landings. Related to helicopter landings, we found no mention of how, or if, any restrictions on the numbers of helicopter landings proposed in the plan would apply to non-recreational uses, including mining. It is our understanding, based on communications with BLM planning staff, that the maximum number of landings proposed in the draft plan would apply only to recreation/Special Recreation Permit (SRP) related landings. The Plan Amendment should clearly state that there will be no limit on the number of non- recreational helicopter landings, including for mining, in the Haines Block.
Denatha	Crockett	Alaska Miners Association, 121 W. Fireweed Suite 120, Anchorage, Alaska 99503	General	In conclusion, AMA supports Alternative D of the Ring of Fire Draft Management Plan Amendment/Draft Environmental Impact Statement for the Haines Block Planning Area and urges you to adopt this alternative.
Kimberly	Strong	bwillard@chilkat-nsn-gov	General	The Chilkat Indian Village (CIV/village) - Tribal Council thanks you for the opportunity to comment on the 320,000 acres of BLM-managed public lands in the Haines area. Our traditional territory reaches from Berners Bay in the south to Stone House Creek (Three Guardsman area), Canada, in the north. At the time of western contact, our Tribe controlled 2.6 million acres of land. With western world expansion, control over our territory gave way to “land grabs” from the US Government, the territory of Alaska, the Canadian Government, and finally the city and boroughs of Haines and Juneau. Our traditional lands are currently under control of five to six separate governments that do not seem to hold the well-being and survival of our Tribe as a priority. The proposed options for commercial use of BLM land in the vicinity of Klukwan is but one example of this lack of concern for the survival of our Tlingit people. Although the lands have been taken from our Tribe, we have not given up our rights and sense of stewardship to our ancestral land and its resources.

First	Last	Contact Information	Category	Comment
Kimberly	Strong	bwillard@chilkat-nsn-gov	Land Use Designation	Land utilization matters to the people of Klukwan. Living in harmony with the land and sustainably harvesting the wild stock salmon, and wild game such as bear, mountain goat, and moose, gathering berries, seaweed and other edible plants continues to sustain our people today. The wealth of these lands and waters has allowed our people to not only survive, but thrive, for untold generations, thus protection of our lands and the traditional values of hunting, fishing, and gathering are of paramount importance to us. The Chilkat Indian Village, Tribal Council hereby formally requests that the Bureau of Land Management keep the Takshanuk Mountain range clear of commercial helicopter activity. We believe that the wildlife and people who inhabit the Klukwan tribal lands and surrounding native allotments would be negatively impacted by commercial helicopter use in the area.
Kimberly	Strong	bwillard@chilkat-nsn-gov	conomics	Chilkat Indian Village according to the 2010 US Census is an economically distressed community. So, we disagree with the statement BLM claims on page in the on page 6 of the e-planning document: "Environmental Justice (pursuant to Executive Order 12898) - There are no known Environmental Justice concerns pertinent to this planning effort. Within the Planning Area, BLM-managed lands are not adjacent to areas with minority or low-income populations that would be disproportionately affected by the decisions made out of this planning effort." The Chilkat Indian Village of Klukwan and Alaska Native Allotments (under our Tribal jurisdiction) adjacent to the Lands Controlled by BLM will be impacted by commercial uses on BLM lands.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	The Chilkat Valley is of significant historic, cultural and scenic value to the people of Klukwan.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Wildlife	We request you consider the significant impact on the goat and bear activity that will occur if heli-skiing is allowed in critical habitat areas. Bears and goats start to be active in early spring around the same time as heli-ski operations. Bears leaving their dens, and goats are moving to lower elevations. The village considers Takshanuk Mountain a critical habitat area of the mountain goat and bear. Any helicopter activity in these areas will negatively impact their habitat. Our ancestors taught us to have respect for the animals and our natural environment as they are crucial to the survival of Chilkat Tlingit's (human beings).
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	The Brown Bear is a significant creature within our oral history, especially with the Kaagwaantaan clan which holds the crest of the brown bear. That cultural connection creates within us an even greater respect for this animal and an increased desire to protect its habitat. The Mountain Goat is also important to us as a traditional food source. Part of our Cultural identity is recognized in our Chilkat Robes (Blankets). Traditionally our Chilkat Robes are made with mountain goat fur that is hand carded, spun and woven into Clan Crests symbolizing our heritage.

First	Last	Contact Information	Category	Comment
Kimberly	Strong	bwillard@chilkat-nsn-gov	cultural Resources	We do take exception to BLM's statement in the DEIS: "Effects of helicopter-supported activities on cultural resources, specifically availability of mountain goat wool- This was identified as an issue during the public scoping process. However, local dependence upon these culturally important resources (i.e., mountain goat wool) is very low due to the distant and generally inaccessible nature (steep terrain and glaciation) of the BLM-managed lands" The BLM lands where once part of the Chilkat Tribal territory and we have a responsibility to our future (next seven generations) Tribal members to protect the land so they may have an opportunity to harvest Mountain Goat meat and fur in some areas that have not been commercialized for western exploitation in the Takshanuk Mountain area.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	The Takshanuk Range also carries additional spiritual meaning to our Tribe because of Shaman burial sites located in the area. Despite the stereotypical portrayal of the Shaman's role by outsiders, the Shaman, or traditional medicine man, were indeed able to foretell the future, heal the sick, communicate over long distances without modern technology, and prevent evil consequences stemming from those who practiced witchcraft. Shamans were never cremated (as was the traditional Tlingit practice) and their bodies were never laid to rest near other people.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	They were always placed higher in elevation---usually somewhere in the mountains. It is said that the shaman was regarded with so much fear by the people, that our people never approached the burial site of a shaman. That being said, somewhere along the Takshanuk Ridge lies shaman tombs. In efforts to respect our ancestors and our traditions, we are not willing to share the exact location of the shaman grave sites and respectfully request that this area remain off limits to heli-skiing activities.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	The Chilkat Indian Village strongly opposes commercial helicopter activities in the area of the Takshunuk Mountain for the following reasons, too. Tlingit historical knowledge and numerous scientific studies include detailed threats to mountain goat populations from human disturbance, including studies discussed in the 2012 DEIS, Ring of Fire process and other BLM helicopter landing environmental documents dating back to 1995. It is understood by our people that goats do not like to be amongst humans and that is why they live in the mountains. We believe that heli-skiing will create a great deal of stress upon the goat population.

First	Last	Contact Information	Category	Comment
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	In addition, we want to express our concerns that current mitigation measures that have been applied do not adequately protect the mountain goats. We request that BLM do a thorough evaluation of the management recommendations made by the Northern Wild Sheep and Goat Council (NWSGC). We believe there are many places to heli-ski in the Chilkat Valley without opening up critical Mountain Goat, Bear Den habitat and culturally spiritual areas for commercial helicopter use. We would like for BLM to continue the protection of the "Monitor and Control Area" that has been used on and around the Takshanuk Mountain and continue to restrict it from commercial uses in order to protect the aforementioned wildlife.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	We offer and propose that the Haines Block lands indeed meet the "Importance" criterion for ACEC designation. We further request the Supplemental ROF document evaluate one or more alternatives that create an ACEC to be managed as a RNA. The ACEC designation will provide a more rigorous and necessary management strategy to protect the outstanding and genetically unique mountain goat resource in the Haines area.
Kimberly	Strong	bwillard@chilkat-nsn-gov	Cultural Resources	Finally, it does not seem that our concerns and requests do not fall into the various options given to us by the BLM office and so, we cannot choose options A, B, C, D, E, or X as none of them address our tribal concern of protecting Chilkat Indian Village's Culturally significant sites which include Monitor and Control Area used for goat and bear denning studies. Therefore, we request an additional option that will protect our culturally significant sites on and around the Takshanuk Mountain.
Cheryl	Stickler	rcstickler@gmail.com	General	I am writing to oppose the BLM proposal that amends the Ring of Fire Land Management Plan. As a longtime resident in the Chilkat Valley (Haines, AK), I have a vested interest in the land management plan. This amendment is not necessary, and it will restrict access and use of *public* lands.
Cheryl	Stickler	rcstickler@gmail.com	General	Current uses of BLM land in our valley include outdoor recreation and access to State lands for natural resource extraction. Restrictions of our *public* lands as proposed in the Ring of Fire amendment is overreaching and prohibitive of our rights as residents and citizens.
Cheryl	Stickler	rcstickler@gmail.com	recreation	I strongly urge you to consider how the language in the proposed amendment will affect much more than the purported intent. Restricting helicopter landings to within 0.5 miles of "potential goat habitat" not only targets a specific industry and economic base in our valley (world renowned helicopter skiing), but its vague language will infringe on the rights of land use and recreation we currently enjoy.
Cheryl	Stickler	rcstickler@gmail.com	General	BLM land is public land. It belongs to the us - the public. I encourage you to examine how the amendment will undermine meeting the BLM mission to "sustain the health, diversity, and productivity of the public lands for the *use and enjoyment ofpresent and future generations*" [italics added]. It is incumbent upon the BLM decision-makers to reject the proposed amendment to the Ring of Fire Land Management Plan. Restricting access to our public lands now will restrict access for our next generations.

First	Last	Contact Information	Category	Comment
Cheryl	Stickler	rcstickler@gmail.com	General	The land is part of who we are, part of our economy, and part of our cultural identity. Thank you for your thoughtful and informed oversight of our lands in service to us as the public, our diverse needs, and our position as primary stakerholders in land management. I urge you to reject the amendment to the Ring of Fire Land Management Plan.
Christy	Fowler	christytengsak@gmail.com	ACEC	Please do not place an Area of Critical Environmental Concern designation on the Haines area. There are enough restrictions in place right now.
Christy	Fowler	christytengsak@gmail.com	Economics	My husband and I own a business in Haines which has been in my family for 65 years. Every year we go further in debt. Our community desperately needs an economic boost and our best chance is resource development. Our son beenemployed at Constantine Mine for the last six years, and is paying his own way through the Civil Engineering program at UAF Fairbanks. We are lucky he has the opportunity to work here and wish that other young folks will be able to find jobs here in the future. Also, the Alaska Mental Health Trust lands would be affected by an ACEC designation, and their development is supporting college kids across the state.
Christy	Fowler	christytengsak@gmail.com	Recreation	We are lucky that Haines is considered a mecca for helicopter skiing and snowboarding. People are wanting to come here from all over the world to enjoy our mountains. They come at exactly the time when we are most impoverished and needing some business. There are so many restrictions as it is, it would be very unfair if more were added.
Christy	Fowler	christytengsak@gmail.com	Other Jurisdictions	Please do not further inhibit this area. In the 1980's, my father, Marty Tengs, and many others worked hard on the designations of lands in our valley so that environmentalists and those for development would all be able to sign off on a workable plan, which they did. Please respect the activists who want to shut down mining and helicopter recreation in Haines.
Shannon	Thompson	Codi_srt79@yahoo.com	General	I don't agree
Shannon	Thompson	Codi_srt79@yahoo.com	General	My name is Shannon Thompson my dad is Merrill palmer that has the palmer project in Haines
Kathlenn	Menke	ci@akmk.com	General	Thanks for the opportunity to comment.
Kathlenn	Menke	ci@akmk.com	ACEC	Please make goat and bear habitat a priority when managing helicopter (and other) activity in Northern Lynn Canal. Make this an area of Critical Environmental Concern.
Kathlenn	Menke	ci@akmk.com	MCA	Retain the Monitor and Control Area in all management alternatives in the upcoming SEIS.

First	Last	Contact Information	Category	Comment
Kathlenn	Menke	ci@akmk.com	Recreation	Please keep allotted helicopter landings reflective of actual trends, not unrealistic industry demands (which never cease). BLM please monitor for compliance.
Kathlenn	Menke	ci@akmk.com	Other Jurisdictions	Please honor 1996 Haines community advisory vote against summer helicopter tours based in Haines.
Kathlenn	Menke	ci@akmk.com	Land Use Designation	Unrelated to heliskiing industry, but important to land management where BLM manages lands in upper watersheds, keep in mind that whatever happens upstream (logging, mining, road-building) affects the health of the entire watershed and its important wild fish stocks and wildlife and quality of life for people with traditional lifestyles. Be open to cooperative inter- agency management that is watershed based.
Kathlenn	Menke	ci@akmk.com	General	Thank you for your excellent listening process.
Craig	Dahl	cdahl@juneauchamber.com	ACEC	The Greater Juneau Chamber of Commerce strongly opposes the proposed amendment, which if approved, would place an "Area of Critical Environmental Concern" over state-selected mining and recreational lands in the Haines area. The BLM has already analyzed the criteria for ACEC designation, concluding that this area did not warrant being designated as an ACEC.
raig	Dahl	cdahl@juneauchamber.com	3809 Regulations	We believe that BLM 3809 regulations are sufficient to allow development and protect other resources. Since nothing has changed since BLM's 2012 determination that an ACEC designation was not needed, we want to be sure that the ACEC issue is not simply an effort to prevent mining and recreation. BLM certainly needs to consider the impacts of any restrictive land use designations, particularly an ACEC, could have on the surrounding State land, including that held by the Alaska Mental Health Trust.
Craig	Dahl	cdahl@juneauchamber.com	Economics	The Greater Juneau Chamber of Commerce supports responsible resource development that is very important for the economic health of the region, including Haines.
Darsie	Culbeck	darsie@live.com	ACEC	I live in Haines, Alaska and do not believe that the proposed ACEC for mountain goats in needed to protect the resource. I have spent the past 28 years in the mountains of Haines working as a mountain guide and as a mountain safety/ risk manager professional in the mineral exploration industry. I am especially familiar with the mountains around the Glacier Creek, Porcupine, Tsirku, Klehini and Takin river drainages. As a co founder of Alaska Mountain Guides I spent multiple months every year climbing, skiing and camping in these mountains. Many ofthese trips were two to three weeks in length, year after year and I was, and continue to be, aware of the wildlife in these areas.

First	Last	Contact Information	Category	Comment
Darsie	Culbeck	darsie@live.com	Wildlife	I am familiar with the current ADF&G goat models. In some cases these models correlate with my years of experience and in some areas they do not. I don't believe the models are 100% accurate and would caution land mangers from making important land use decisions with significant economic ramifications based on these models. In my opinion ADF&G has not proven that helicopter use in these areas has caused a negative effect on goat populations.
Darsie	Culbeck	darsie@live.com	Economics	Both tourism and mining have long histories in Haines and are important economic drivers of the current economy. I believe that the helicopter activities associated with these industries are already well regulated and are not having a significant impact on goat populations.
Darsie	Culbeck	darsie@live.com	Wildlife	In conclusion, I am in favor of buffers for actual animals, but not for restrictions based solely on habitat models.
Dennis	DeWitt	dewttllc@me.com	ACEC	First Things First Alaska Foundation strongly opposes the proposed amendment, which if approved, would place an "Area of Critical Environmental Concern" over state-selected mining and recreational lands in the Haines area. The BLM has already analyzed the criteria for ACEC designation, concluding that this area did not warrant being designated as an ACEC.
Dennis	DeWitt	dewttllc@me.com	3809 Regulations	We believe that BLM 3809 regulations are sufficient to allow development and protect other resources. Since nothing has changed since BLM's 2012 determination that an ACEC designation was not needed, we want to be sure that the ACEC issue is not simply an effort to prevent mining and recreation.
Dennis	DeWitt	dewttllc@me.com	Land Use Designation	BLM certainly needs to consider the impacts of any restrictive land use designations, particularly an ACEC, could have on the surrounding State land, including that held by the Alaska Mental Health Trust.
Dennis	DeWitt	dewttllc@me.com	General	First Things First Alaska Foundation supports responsible resource development that is very important for the economic health of the region, including Haines.
Ed	Fogels	edfogels@gmail.com	ACEC	I would like to comment proposed amendment to the Ring of Fire Management Plan. I am very concerned about any proposed Areas of Critical Environmental Concern (ACECs), especially those that would encompass state selected mining and recreational lands. I recently retired from a thirty-year career as a professional natural resource manager for the State of Alaska, and I have watched as BLM has put hundreds of thousands of acres in ACECs, virtually creating new Conservation System Units throughout our state. CSUs are lands managed by federal agencies such as the National Park Service and the Fish and Wildlife Service. BLM landsare intended to be multiple use lands, and ACECs remove BLM lands from multiple use.

First	Last	Contact Information	Category	Comment
Ed	Fogels	edfogels@gmail.com	3809 Regulations	1) BLM 3809 regulations are sufficient to allow development and protect other resources;
Ed	Fogels	edfogels@gmail.com	ACEC	2) nothing has changed since BLM's 2012 determination that ACEC not needed;
Ed	Fogels	edfogels@gmail.com	ACEC	3) BLM needs to consider the impacts of any restrictive land use designations, particularly ACECs, on the surrounding State land, including lands held by the Alaska Mental Health Trust;
Ed	Fogels	edfogels@gmail.com	Other Jurisdictions	4) BLM needs to consider the impacts of ACECs, on the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle Preserve and the Haines State Forest; and
Ed	Fogels	edfogels@gmail.com	General	5) BLM needs to be careful that the ACEC issue is not simply an effort to prevent mining and recreation.
Elaine	Bell	elainebellak@gmial.com	General	Thank you for coming to Haines and your presentation. I am a year round resident of Haines and I do not share the opinion of the environmental groups.
Elaine	Bell	elainebellak@gmial.com	Land Use Designation	There is no need to create any areas for environmental concerns. The land scape itself allows for space for the goats, fish and other wildlife. The use of this area for heli-skiing, four wheeling, hunting, berry picking, resource extraction and mining does not hurt the environment. There just simply is no use for this designation. I personally feel it is just another tactic used by environmental groups to lock up more land. Please do not fall prey to their rhetoric.
Elsa	Sebastian	elsa@lynncanalconservation.org	ACEC	The undersigned organizations support retaining the current Mountain Goat Monitoring and Control Area in the BLM Haines Block, and protecting it by creating an Area of Critical Environmental Concern (ACEC) to be managed as a Research Natural Area (RNA).
Elsa	Sebastian	elsa@lynncanalconservation.org	ACEC	The Federal Land Policy Management Act prioritizes creating ACEC's for those areas meeting Importance and Relevance criteria. The Mountain Goat Monitoring and Control Area contains an important mountain goat resource that is sensitive to human disturbance. This resource has special worth and is more than locally significant because naturally occurring mountain goat populations on BLM managed lands nationwide have become scarce. Additionally, research completed in 2011 and 2012 by Dr. Aaron Shafer shows these goat populations are genetically unique, and therefore "irreplaceable". Creating an ACEC managed as an RNA inside the Monitoring and Control Area would allow the special management needed to protect those goats from expanding helicopter-supported recreation.

First	Last	Contact Information	Category	Comment
Elsa	Sebastian	elsa@lynncanalconservation.org	ACEC	Any other management designation would require meeting "the strategically-targeted primary recreation market demand" for helicopter-supported recreation (2012 DEIS page 3-174), putting these important and unique goat populations at risk. BLM has already determined that a Special Recreation Management Area (SRMA) would allow "continued adverse effects [to mountain goats] of a currently unspecified magnitude from [helicopter- supported] recreational activities." (PRMP/FEIS Attachment C page 20). There is an obvious inherent conflict between meeting the demand for new helicopter landing areas and protecting an area from the mandated activity. Considering the importance, significance, sensitivity, and vulnerability of the resource, the management focus for the Monitoring and Control Area needs to be on protecting goats, not providing helicopter recreation opportunities. This would be in keeping with the BLM management directive that "special management attention…protect[s] the importance and relevance values of an area from the potential effects of actions permitted by the RMP." (BLM Manual 1613.1.12).
Elsa	Sebastian	elsa@lynncanalconservation.org	ACEC	"ACEC designations highlight areas where special management attention is needed to protect, and prevent irreparable damage to important. . . wildlife resources ….The ACEC designation indicates to the public that the BLM recognizes that an area has significant values and has established special management measures to protect those values. In addition, designation also serves as a reminder that significant value(s) or resources(s) exist which must be accommodated when future management actions and land use proposals are considered near or within an ACEC." (BLM Manual 1613.02).
Elsa	Sebastian	elsa@lynncanalconservation.org	ACEC	An ACEC can be managed as an RNA, where "research and monitoring are encouraged" and serve as a "baseline" for long-term change. (PRMP/FEIS page 3-186). Research and monitoring are necessary because Haines/Skagway goat populations are currently threatened by acknowledged adverse impacts of "unspecified magnitude" from the increasing use of helicopters inside and over goat habitat. Specific scientific concerns about impacts to mountain goats include: displacement from prime habitat, acute or chronic reduction in foraging efficiency resulting in nutritional deficiency, reproductive failure, and increased vulnerability to predation. (1995 BLM and USDA EA for Helicopter Landing Tours in the Skagway and Haines Area pages 3-12 and 3-13).

First	Last	Contact Information	Category	Comment
Elsa	Sebastian	elsa@lynncanalconservation.org	Recreation	In 2001, heli-ski permits were issued in some non-impacted areas previously identified as control areas, necessitating the creation of a formal Mountain Goat Monitoring and Control Area. (BLM Anchorage: Monitoring Mountain Goat Habitat Fidelity and Population Stability in Occupied Habitats With and Without Helicopter-supported Commercial Recreation in the Haines/Skagway Area of Alaska, page 5). BLM stopped monitoring goat populations in 2006, and then proposed placing the area inside a SRMA. Without the protective management afforded by an ACEC/RNA designation, helicopter landings will continue to expand into the Monitoring and Control Area until there are no non-impacted goat populations left.
Elsa	Sebastian	elsa@lynncanalconservation.org	Wildlife	BLM has already determined that the Haines Block goat resource is important. (PRMP/FEIS Attachment C page 166). Further, the area has a "particularly diverse and unique set of flora and fauna due to its proximity to both interior Canadian ecosystems and coastal temperate rainforest ecosystems" (PRMP/FEIS page 3-57), and has "remarkable natural attributes and opportunities for research and education." (PRMP/FEIS Attachment C page 166).
Elsa	Sebastian	elsa@lynncanalconservation.org	Land Use Designation	Given all the above, eliminating or placing the Mountain Goat Monitoring and Control Area inside a SRMA would cause irreparable harm to a vulnerable and valuable resource that has become scarce on BLM lands nationwide. The current planning process is the appropriate vehicle for creating an ACEC to be managed as an RNA, and we fully support this option.
Meredith	Trainor	Southeast Alaska Conservation Council		See comments
Edward	Schmitt	Alaska Wildlife Alliance		See comments
Christin	Anderson	Sierra Club Alaska Chapter		See comments
Brian	Okonek	Alaska Quiet Rights Coalition		See comments
Larry	Edwards	Alaska Rainforest Defenders		See comments

First	Last	Contact Information	Category	Comment
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	Lynn Canal Conservation (LCC) is a grassroots conservation organization based in Haines, Alaska. LCC and our members have been involved in the Ring of Fire(ROF) planning process since its inception. Our members use and enjoy lands administered by BLM in the Haines Block. LCC is committed to protecting the long-term health and vitality of the resources on these public lands. This is in accordance with the BLM mission of sustaining the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. Our concerns regarding adverse impacts to mountain goats from the recreational use of helicopters were first expressed during scoping for the 1995 Environmental Assessment for Helicopter Landing Tours in the Skagway and Haines Area jointly conducted by BLM and US Forest Service (USFS). In 2003 LCC filed Ring of Fire scoping comments. In 2004 LCC nominated an area inside the Haines Block for consideration as an Area of Critical Environmental Concern (ACEC) to be managed as a Research Natural Area (RNA). In 2005 LCC submitted comments on the draft RMP/EIS and testified before the Alaska Resource Advisory Council. In 2006 LCC submitted RMP/EIS comments, submitted a second ACEC request, and filed a protest that was upheld in February of 2008. In 2009 LCC submitted comments for the SEIS. In 2013 LCC submitted comments on the 2012 DEIS.[1]
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	Numerous scientific studies elaborate threats to mountain goat populations from human disturbance, including studies discussed in the 2012 DEIS, studies cited in previous LCC comments and filings referenced above during the Ring of Fire process and other BLM helicopter landing environmental documents dating back to 1995. In these most recent comments we will continue to:
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Advocate that Haines Block lands do indeed meet the “Importance” criterion for ACEC designation.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Request the Supplemental ROF document evaluate one or more alternatives that create an ACEC to be managed as a RNA. The ACEC designation will provide a more rigorous and **necessary** management strategy to protect the outstanding and genetically unique mountain goat resource in the Haines area.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Wildlife	Express our concerns that current mitigation measures do not adequately protect mountain goats. We request a thorough evaluation of the management recommendations made by the Northern Wild Sheep and Goat Council (NWSGC), and supported by the Alaska Department of Fish and Game (ADFG), and request the Supplemental DEIS specifically address BLM mitigation requirements in a scientifically defensible manner.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	Request the Supplemental DEIS update the historical data supplied in Table 7 (page 35, DEIS) and also separate out the analysis of summer helicopter landings originating from Skagway and winter landings originating from the Haines airport and Haines Borough approved heliports.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	MCA	Advocate that the Monitoring and Control Area be retained, whether or not BLM decides to select an alternative with an ACEC.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Land Use Designation	Evaluate using a Backcountry Conservation Management (BCM) designation for Haines, "South Block" lands, rather than a SRMA or ERMA.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**ACEC Importance Criterion** The DEIS determined Haines Area BLM lands met the "Relevance" criterion. The Supplemental must specifically address LCC's rationale for asserting Importance, namely that:
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	The **overwhelming majority** of naturally occurring mountain goat populations on BLM lands **nationwide** occurs in the Haines Area (Shafer et al 2012 a) making the goat populations more than "locally significant" in the context of BLM managed lands. That is, outside of the Haines Block, naturally occurring goat resources are a scarce BLM resource. (2004 LCC Nomination Letter, and 2005 LCC DEIS comments at 6, citing the BLM Manual at 1613.1.11.B). BLM must "consider the relative scarcity of the values involved" in making its determination.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Goats are extremely susceptible to human disturbance in general, and disturbance from helicopters in particular, making this resource "sensitive" and "vulnerable". (2004 LCC nominating letter at 1 through 3).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Research discussed below shows Haines Area mountain goats are genetically "unique" and are therefore "irreplaceable" (See BLM Manual 1613.1.11.B).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Instead of addressing the specifics of our nomination, the 2012 DEIS instead simply states that the wildlife resources are "typical" of Southeast Alaska. (2012 DEIS, page 21). Despite this inaccurate characterization (as will be explained shortly), the fact is the Haines Block is the only area in Southeast managed by BLM that has significant mountain goat resources. The remainder of Southeast goat habitat is located on Forest Service and state of Alaska managed lands. BLM has specific management requirements that differ from Forest Service and state of Alaska management requirements, and BLM needs to adhere to these management requirements, regardless of how other agencies manage their lands. That is, BLM would be shirking its statutory duties in the hopes that other land managers will responsibly manage the mountain goat resource. Simply stating that the resource is "typical" does not address the susceptibility of goats to helicopter disturbance and does not address the disappearance of BLM goat populations in the rest of the nation (BLM biologist Jeff Denton Email to Haines.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Tourism Planning Committee, p.5 submitted with 2006 LCC ACEC Nomination Letter). The Ring of Fire planning process is the only current – and possibly the only - opportunity to create a management unit that protects mountain goats from impacts of helicopters in this area and provides a control area for necessary future research on helicopter impacts to mountain goats. The importance of necessary future research is again recommended in the latest (2018) Alaska Department of Fish and Game goat study in the Haines area, as will be discussed below.
Eric	olle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	After review of LCC's September 25, 2006 Protest of the ROF Proposed Resource Management Plan and Final Environmental Impact Statement, BLM agreed to reevaluate the Importance Criterion and related aspects of the ACEC designation process. The protest decision also stated the public would be offered an opportunity "to submit additional supporting information" to assist BLM on its ACEC designation. (February 29, 2008, PP-AK-Ring of Fire 006-01, 1617.2-(210)P). Since that time we have learned that the Chilkat Indian Village has also supported an ACEC designation. Other groups that have supported an ACEC designation in the Haines Block include the Alaska Coalition, the Alaska Center for the Environment, the Center for Biological Diversity, Alaska Quiet Rights Coalition, Alaska Wildlife Alliance, Defenders of Wildlife, Sierra Club Alaska Chapter, Southeast Alaska Conservation Council, and The Wilderness Society.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**Significant New Information** Dr. Aaron Shafer did his doctoral thesis on the evolutionary history and population structure of mountain goats by analyzing tissue samples from goats in Alaska and British Columbia over a ten- year period. Dr. Shafer's work has resulted in numerous peer- reviewed scientific articles on mountain goats that include analyses of data collected in the Haines and upper Lynn Canal areas (Shafer et al. 2011a, Shafer et al. 2011b, Shafer et al. 2012a, Shafer et al. 2012b). This recent research should inform BLM decision-makers and must be addressed in the Supplemental DEIS.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	The 2012 DEIS states that "the wildlife resources and natural processes in the Planning Area are **typical** of all of Southeast Alaska, and **are not unique** to the mountainous regions of southeast Alaska" (2012 DEIS, page 21, emphasis added). To the contrary, Shafer's research shows that a "refugial [goat] population survived the last glaciations in Southeast Alaska, specifically in the Haines/Skagway area and existing data suggests the [Haines Block] Ring of Fire region has numerous **genetically discrete** mountain goat herds." (Shafer et al. 2011a). Shafer's "genetically discrete" description is quite different from the DEIS characterization of "typical" and "not unique". In fact, Shafer uses the word "unique" to describe Haines/Skagway goats: "The Haines/Skagway area mountain goats **are unique** among Alaska and indeed the species range." (February 2013, Shafer DEIS comments to BLM, emphasis added). This information (published in 2011 and 2012) shows the Haines/Skagway mountain goat wildlife resource is indeed unique and therefore more than locally significant, and does in fact meet the Importance Criterion.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	sensitive, irreplaceable or vulnerable. Further, many studies quoted in the 2012 DEIS state goats are "sensitive" to human disturbance. Specific scientific concerns about mountain goats include: displacement from prime habitat, acute or chronic reduction in foraging efficiency resulting in nutritional deficiency, reproductive failure, and increased vulnerability to predation. (1995 BLM and USDA EA for Helicopter Landing Tours in the Skagway and Haines Area at 3-12 and 3-13). Additionally a 2018 publication by the Alaska Department of Fish and Game reiterates that mountain goats "are particularly sensitive to human and industrial disturbance" (*Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management*, White, Gregovich 2018, page iv). And again from the same publication: "Mountain goats exhibit heightened sensitivity to aerial disturbance such as helicopters and fixed wing aircraft (Foster and Rahs, 1983, Cote 1996, Goldstein et al 2005, Cadsand 2012, Cote et al 2013)" (id page 1).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Not only are Shafer's 2011 and 2012 peer-reviewed studies highly relevant to ACEC creation, Shafer submitted comments to BLM that specifically support an ACEC designation: The data "support the designation of an Area of Critical Environmental Concern as: i) it is an area essential for maintaining species (mountain goat) diversity; ii) the genetic diversity and refugial origin make it a distinctive and irreplaceable source of biodiversity." (Shafer comments submitted to BLM 2/10/13)

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Both the older and more recent information cited above show that Haines mountain goat resources are not only important, but also unique, and therefore have significant values that need to be protected from activities known to cause disturbance. This is precisely the rationale cited in the BLM Manual for creating ACECs: "ACEC designations highlight areas where special management attention is needed to protect, and prevent irreparable damage to important. . . wildlife resources ….The ACEC designation indicates to the public that the BLM recognizes that an area has significant values and has established special management measures to protect those values. In addition, designation also serves as a reminder that significant value(s) or resources(s) exist which must be accommodated when future management actions and land use proposals are considered near or within an ACEC." (BLM Manual 1613.02).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Clearly, the mountain goat resource is more than locally significant, has special worth, and has qualities that make it sensitive. All that is missing is the recognition by BLM "warranting protection in order to carry out the mandates of FLPMA." (BLM Manual Section 1613.11.B(1), (2), and (3)).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Further, we understand that the Chilkat Indian Village has requested BLM create an ACEC. Mountain goats are a culturally significant resource for the village, as their nomination, no doubt, details.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**Support for ACEC/RNA designations in FLPMA and BLM Handbook** Both the Federal Land Policy and Management Act of 1976 (FLPMA) and the BLM Manual allow members of the public in general, and conservation organizations in particular, to request special land use designations during a land use planning process (43 CFR 1610.7-2, and BLM Manual at 1613.21.A and B). Public law insures these requests
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	will be evaluated in the upcoming RMP by providing an alternative that addresses the merits of such designations (BLM Manual at 1613.22.B). BLM Manual at 1613.02 mandates BLM to "establish special management measures to protect [significant] values." We believe special management measures are required to protect and prevent irreparable harm to goats and the predators that depend on goats as a food source.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	BLM shall "give priority to designating and protecting areas of critical environmental concern." (*Handbook* at 11 and 43 U.S.C. 1712 Section 202(c), and 42 USC 1711 Section 201(a)). That is, if BLM takes the NEPA required "hard look" and seriously considers concerns expressed by the Alaska Department of Fish and Game, the Northern Wild Sheep and Goat Council, the research of Dr. Aaron Shafer, and wildlife conservation advocates, it will prioritize the requested ACEC designation as mandated.

First	Last	Contact Information	Category	Comment
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	BLM shall "consider the relative scarcity of the values involved." (Id). We made the case in our 2004 ACEC/RNA nomination that the majority of naturally occurring mountain goats on BLM lands **nationwide** are located in the Haines Block. (LCC 2004 nomination). Dr. Shafer's research indicates the goats in this area are "a distinctive and irreplaceable source of biodiversity" that is "essential for maintaining species diversity." (February 2013 Shafer DEIS comments to BLM)
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	CEC	"In developing alternatives, the BLM must consider the relative scarcity of the values involved and the availability of alternative means and sites for realizing those values (43 U.S.C. 1712(c)(6))". (*Handbook* at 22). In our 2004 nomination we made the case that naturally occurring mountain goat populations are a scarce BLM resource outside of the Haines Block. (LCC's 2004 nomination letter). On the other hand, BLM and US Forest Service offer thousands of helicopter landing opportunities for recreational uses along the entire east side of Lynn Canal from Juneau to Skagway. (*USDA Helicopter Landing Tours on the Juneau Icefield 2003*
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	*– 2007* EIS, and the May, 1995 *USDA and BLM Environmental Assessment for Helicopter Tours in the Skagway and Haines Area)*. In addition, BLM offers landing sites from the west side of Skagway to the Canadian border. (Id). There is currently no BLM special management area that protects wildlife fromhelicopter-supported recreation, except for the Monitoring and Control Area, which would be removed in 0 to 5 years under all 2012 action alternatives.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	BLM shall "designate research natural areas and outstanding natural areas as types of ACECs using the ACEC designation process." (*Handbook* Appendix C page 28). The Haines Block is noted for its goat habitat and diverse and unique flora and fauna and is perfectly suited for a RNA. (2005 DEIS page 3-56).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	BLM shall consider all reasonable alternatives as mandated by NEPA. (*Handbook* at 20). The ACEC/RNA is a reasonable alternative that meets both the Relevance and Importance criteria, and must be considered.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	FLPMA mandates that BLM manage public lands in a manner that protects their environmental qualities including important wildlife habitat (43 U.S.C. 1701). An ACEC is an area where special management attention is required to protect and Prevent irreparable damage to wildlife resources. FLPMA requires that when developing and revising its land use plans, BLM **give priority** to the designation and protection of ACECs. (Id.) Also please note our nomination received significant support from other individuals and organizations (as indicated in the administrative record).

First	Last	Contact Information	Category	Comment
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	**The Supplemental DEIS Needs a Sufficient Range of Alternatives** Providing an adequate range of alternatives is "the heart of the environmental impact statement." (40 CFR 1502.14). The range of alternatives proposed in the 2012 DEIS includes current management (Alternative A), and, allegedly "**other alternatives that strive to resolve the major planning issues while emphasizing the different management scenarios**. Alternatives usually vary by the amount of resource production or protection that would be allowed." (2005 DEIS page 1-10, emphasis added).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	However, in regard to resolving the major Haines Block planning issue of conflicts between increasing helicopter use and protecting goats and other wildlife, **all action alternatives in the 2012 DEIS are essentially the same, and all resolve the conflict in the same way - by allocating excessive amounts of landings**. All existing alternatives are resource development ones, to a greater or lesser extent, and there is no true conservation alternative. We request the Supplemental DEIS include a true conservation alternative that would create an ACEC managed as an RNA inside the current Monitoring and Control Area. A true conservation alternative for Haines lands would consider a BCM management strategy because it seems to be a better fit for the area involved: "intact" and "undeveloped" area with "unfragmented habitats". This is in keeping with a 2012 DEIS determination of the Haines Block as "landwith wilderness characteristics" (Appendix 4/16/2012) and a determination that the South Block is "primitive" ROS. (2012 DEIS page 32).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	Additionally, alternatives should address the purpose and need, which is articulated as establishing "a maximum number of annual helicopter landings in the Planning Area that meets the needs of the local economy, recreational use demand, as well as protects natural resources." (2012 DEIS, page 4). Table 7 shows that allotted landings already significantly exceed demand (Id., page 35) and therefore there isno rationale to increase landings, only a rationale to provide alternatives that decrease landings.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	We look forward to seeing an updated Table 7 to determine whether current use levels continue to indicate that landings should be decreased. For clarity, Table 7 should separate summer helicopter landings from winter landings.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	In establishing "a maximum number", we would like to see reasonable caps placed on landings that address the "protect natural resources" part of the management strategy articulated (2012 DEIS page 4), rather than a seemingly narrow focus on industry requests.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	We would like to remind decision-makers that the following Protest issues were upheld by BLM:

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	The DEIS "fails to consider an alternative that closes a substantial amount of land in the Haines Block to helicopter landings, which would be a reasonable alternative in light of the sensitive resources in the planning area." Response – "Your protest point on this issue is upheld."
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	"Alternatives A, B, C and D were essentially identical in terms of impacts to mountain goats. The PRMP/FEIS fails to sharply define alternatives in order to provide a 'clear basis for choice among options' and therefore violates 40 CFR 1502.14." Response – "Your protest point on this issue is upheld. The BLM agrees that the range of alternatives in the FEIS with regard to mountain goats was insufficient. **Management options in the environmental analysis for the Haines Block SRMP will have varying impacts to the mountain goat population**." (Emphasis added).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Range of Alternatives	We look forward to seeing and evaluating the IBLA-mandated new alternatives.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	MCA	**Importance of Maintaining the Existing Monitoring and Control Area** BLM makes an excellent case for retaining the Monitoring and Control area:
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	MCA	"If the Monitoring and Control Area is retained, no permitted helicopter activity would be allowed within the 98,000-acre area in either summer or winter. This would benefit mountain goats and other alpine wildlife by potentially lessening or eliminating noise and disturbance caused by tour aircraft overflights and landings, and thereby reducing any stress and negative effects to wildlife associated with those activities on both summer and winter ranges. In addition, the monitoring and Control Area would remain available for future research on the effects of aircraft disturbance on surrounding areas that have not been excluded from aircraft use" (2012 DEIS page 79).

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	MCA	All action alternatives in the 2012 DEIS would either eliminate the Monitoring and Control Area immediately or remove it in 5 years. This would be completely irresponsible because of the current level of uncertainty regarding short- and long-term impacts from existing and wide-ranging helicopter activities. "Research to date has not clearly identified thresholds of disturbance that trigger unacceptable responses." (Northern Wild Sheep and Goat Council Position Statement, 2004). We do know that increasing levels of helicopter-supported recreation in goat habitat "can result in a variety of negative effects, including habitat abandonment significant enough to affect population status and herd viability, dramatic changes in seasonal habitat use, increased vulnerability to predation, alarm response, decreased bouts of foraging and resting, increased animal movement and energy expenditure, and reduced productivity." (Id.) The DEIS corroborates this: "Little is currently known of the specific short- or long-term population trends of mountain goats in the planning area." (2012 DEIS, page 42).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	MCA	**Therefore it is absolutely essential to retain the Monitoring and Control area so that future research can answer these questions.** Actual assessments of impacts to goats were required by the 1995 ROD (EA for Helicopter Landing Tours in the Skagway and Haines Area) and subsequent IBLA decision (IBLA 95-496); yet the uncertainty of long- and short-term impacts remains two decades later. Eliminating the Monitoring and Control Area would make this much needed and long promised assessment impossible, insuring impacts would remain unknown and unknowable. Since the Monitoring and Control Area is the only Haines/Skagway vicinity area where helicopter activities that "occur throughout the majority of regional high elevation habitats" are currently not allowed, and since BLM's promised analysis of long- and short-term impacts has not occurred, BLM is obligated to protect this one last area from helicopter activity until such time as it can do what the 1995 ROD and IBLA decision mandated: assess long- and short-term impacts and modify helicopter landing permits as necessary.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Wildlife	**Inadequacy of Existing Mitigation** Current management practices by BLM and USFS allow substantial recreational use of helicopters in goat habitat, imposing a 1500-foot buffer as mitigation. However, the consensus from goat biologists is that this buffer is inadequate.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Wildlife	Guidelines recommended by the Northern Wild Sheep and Goat Council, a non-profit organization made up of scientists who are leading experts in mountain goat biology have been submitted by LCC during previous filings and are part of the administrative record.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Wildlife	The 1500-foot buffer adopted by BLM and USFS for summer helicopter tours comes from a study of bighorn sheep in the Grand Canyon (1995 EA at 3-13). Two recent studies show that the 1500-foot buffer helpful to maintaining bighorn sheep populations is inadequate for mountain goats. Foster and Rahs (1983) and Cote (1996) conclude that a 2- kilometer buffer is necessary to avoid disturbance (2001 USDA Helicopter Landing Tours on the Juneau Icefield at 4-21). The Foster and Rahs and Cote studies are very relevant because they studied mountain goat responses, not mountain sheep. In past comments we have discussed that mountain sheep are a different species with different survival mechanisms. (June 23, 2009 LCC comments) Due to their great differences, it is irrational to base goat buffers on one sheep study, particularly when recent goat literature indicates that sheep buffers are inadequate. The complete rationale for adopting greater buffers is articulated in the 2004 position statement of the Northern Wild Sheep and Goat Council. Analysis of the NWSGC position should be included in the Supplemental DEIS, and if its recommended mitigation is not adopted in the Haines Block, BLM must provide the public a scientifically defensible argument.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	**Haines/Winter and Skagway/Summer Helicopter Permits Should be Analyzed Separately** ROF documents have defined "the Haines Block" as BLM managed lands that are located in two distinct boroughs/jurisdictions – the Haines Borough and the Skagway Borough. Haines-based LCC has no specific comments to make regarding flights originating out of Skagway – our comments are directed to Haines based flights and landings.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	Not only is the "Haines" Block in two separate jurisdictions, but according to new information provided by ADFG, **they require different management strategies**. This should provide a sufficient rationale for addressing them separately in the new Supplemental DEIS. The 2018 ADFG publication *Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management* (White and Gregovich), states that summer helicopter landings are completely based out of Skagway and winter helicopter skiing is completely based out of Haines and are therefore both "temporally and spatially segregated." (Page 4). In terms of management strategy for goats, predictable summer flight paths and few designated low impact landing sites can be "readily mitigated." Helicopter skiing requires more flight routes and landing spots. Further, the routes and landing sites are "unpredictable" because they are weather dependent and require "spatially extensive use of landscapes between landing sites." The "additive negative effect" of skiers on the ground "can result in additional disturbance and habitat displacement (Neumann et al 2010, Courtemanch 2014)". The ADFG concluded that regulating, managing and mitigating winter heli-skiing is "a complicated conservation problem (page 2)" as compared with "readily mitigated" summer helicopter tours.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	To reiterate, in terms of goat management, helicopter flights originating from Skagway only occur in the summer and due to the nature of that activity, goat management issues can be "readily mitigated." To the contrary, helicopter flights originating from Haines only occur in winter and goat management is "a complicated conservation problem." Therefore we request BLM separate out its analysis of these different helicopter supported activities.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Recreation	**Monitoring for Compliance and Data Collection** The 2018 ADFG publication identifies a problem with management in our area that does not exist in other areas of North America. Namely, even though Haines Borough and
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Recreation	BLM collectively allowed 2900 skier days in 2017, "helicopter ski runs and landing sites are not currently delineated or monitored. Consequently, it is unclear what proportion of mountain goat habitat within approved areas is actually impacted by helicopter skiing activities" (page 20). Other places in North America have "fine-scale mapping of recreation activities in order to facilitate data-based land and wildlife management decision making (Andrus 2005, Cadsand 2012, Olson et al 2017, Squire et al 2018).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Recreation	Implementation of a similar approach in our study area **will be critical** for future quantification of spatial overlap and, ultimately, evaluation of socio-ecological trade- offs needed to inform management decisions." Until this data is available, no "optimal decision-making framework can be implemented." (Page 20, emphasis added).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Recreation	LCC has argued for years that BLM has shirked any responsibility for obtaining the necessary data to optimally manage the wildlife resources at risk. Additionally, we have requested BLM monitor for compliance to insure operators are skiing in permitted areas. We request BLM make the commitment to work with ADFG and the Haines Borough to create the necessary "fine-scale mapping."
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Land Use Designation	**RNA Designation** All of the above information brings us back to **the need** for an ACEC/RNA designation. In past submissions to BLM, LCC has presented significant scientific evidence in the form of peer-reviewed studies that show that goats are susceptible to human disturbance in general, and aircraft overflight specifically, with helicopters being more disturbing than fixed-wing aircraft. We have also quoted that "studies throughout their range in North America have reported significant declines in populations of mountain goats following modifications of habitats and disturbance from human activities." (Chadwick 1973, Quaedvlieg et al 1973, Phelps et al 1983). After all these years, definitive management strategies are still unknown and problematic, and heli-skiing management is still "a complicated conservation problem" (ADFG 2018).

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Land Use Designation	The current Monitoring and Control Area, as **the only area** in the Haines Block "where helicopter supported recreation has not occurred" (BLM 2018 handout), is the perfect area for an RNA. It is a field site uniquely suited for natural research and education because it is the only site left that has not experienced years of disturbance. It contains outstanding habitat for mountain goats (see attached goat survey maps) in glaciated landforms. BLM has determined the area has a "particularly diverse and unique set of flora and fauna due to its proximity to both interior Canadian ecosystems and coastal temperate rainforest ecosystems" (PRMP/FEIS page 3-57), and has "remarkable natural attributes and opportunities for research and education." (PRMP/FEIS Attachment C page 166). In terms of "animal association", the area is typically representative of surrounding locales, yet it has been untouched by helicopter supported recreation and is therefore still in a natural state. An RNA designation would allow scientists the opportunity to measure behavioral and physiological impacts and compare population densities and productivity data in areas impacted by heli-skiing with areas where helicopter recreation continues to be prohibited. It is the perfect location for an RNA dedicated to continued opportunities for research and education. Further, it is close to the Alaska Chilkat Bald Eagle Preserve, established in 1985 to protect, study, and educate the public on Chilkat Bald Eagles. The proximity to the village of Klukwan, renowned for its Chilkat Blanket weavings of mountain goat wool and the village's remarkable new Jilkaat Kwaan Heritage Center, should also be a significant consideration.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Land Use Designation	**Evaluation of Backcountry Conservation Management** This designation option was not considered/available in the previous ROF document, and it appears to be a more accurate description of Haines "South Block" lands. BLM should analyze the merits of choosing this management category.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Other Jurisdictions	**An Important 2012 DEIS Omission** The current DEIS does not mention the 1996 Haines Borough advisory vote where residents opposed summer helicopter tourism for Haines. Since the community clearly does not support this activity, please state in all Supplemental DEIS alternatives that summer helicopter activities originate only out of Skagway.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	Wildlife	**Bear Denning and Prime Goat Habitats** We request BLM incorporate new (2018) ADFG information identifying important bear denning habitat and prime goat habitat. Helicopter landing permits should not be issued in prime habitat areas.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**ACEC Nomination Form** After several unsuccessful attempts at using the BLM ACEC nomination form, we will instead briefly address the relevant questions for **ACEC Nomination** here:
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	General Location: Current Monitoring and Control Area Acreage: 98,000 acres
Eric	Holle	ynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Values Considered: We have made the case that Haines Block mountain goats are genetically unique and therefore irreplaceable, and due to impacts from helicopter skiing, are vulnerable and susceptible to disturbances ranging from displacement from prime habitat to chronic reduction in foraging efficiency which can lead to nutritional deficiency, reproductive failure and increased vulnerability to predation. We have made the case that the overwhelming majority of goat populations on BLM lands **nationwide** occur in the Haines area, therefore invoking the "relative scarcity" provision of FLPMA and the BLM manual which mandate giving ACEC designation "priority".
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**Relevance** 1a) Significant cultural resource important to Native Americans: Chilkat Blankets are made from mountain goat wool and therefore both goats and Chilkat Blankets are important cultural resources. Chilkat Blankets are on display locally in the Haines Sheldon Museum and at the Jilkaat Kwaan Heritage Center in Klukwan, as well as nationally in places like the Met Museum in New York City.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	1)b Wildlife resource that is sensitive and essential for maintaining species diversity: We have provided reference to many peer reviewed scientific studies that attest that goats are sensitive to human disturbance in general and aircraft overflight in particular, including the most recent ADF&G study conducted in the Haines Block. We have provided sufficient data that "support the designation of an Area of Critical Environmental Concern as: i) it is an area essential for maintaining species (mountain goat) diversity; ii) the genetic diversity and refugial origin make it a distinctive and irreplaceable source of biodiversity." (Dr. Aaron Shafer's comments are part of the administrative record).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	1)c Rare plant species: According to BLM the area has a "particularly *diverse* and *unique* set of flora and fauna due to its proximity to both interior Canadian ecosystems and coastal temperate rainforest ecosystems" (BLM PRMP/FEIS page 3-57, emphasis added), and has "remarkable natural attributes and opportunities for research and education." (PRMP/FEIS Attachment C page 166).
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	**Importance** 2)a More than locally significant and therefore has special worth and distinctiveness: We have shown that Haines Block goats are genetically distinct and therefore have special worth. We have also shown that the overwhelming majority of BLM managed goat herds in the entire nation occur in the Haines Block.

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Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	2)b Fragile, sensitive, irreplaceable, unique, vulnerable: The administrative record of past LCC comments and our 2018 comments all show that **all** of these adjectives apply to the Haines Block goat resource.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	Does the area require special management to prevent irreparable damage to resources:
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	ACEC	In 2001, heli-ski permits were issued in some non-impacted areas previously identified as control areas, necessitating the creation of a formal Mountain Goat Monitoring and Control Area. (BLM Anchorage: *Monitoring Mountain Goat Habitat Fidelity and Population Stability in Occupied Habitats With and Without Helicopter-supported Commercial Recreation in the Haines/Skagway Area of Alaska*, page 5). BLM stopped monitoring goat populations in 2006, and then proposed placing the area inside a SRMA to be managed to provide helicopter recreation. Without the protective management afforded by an ACEC/RNA designation, helicopter landings will continue to expand into the Monitoring and Control Area until there are no non-impacted goat populations left.
Eric	Holle	Lynn Canal Conservation, Inc. Box 964, Haines, Alaska 99827	General	Thank you for the opportunity to provide comments. We look forward to a Supplemental DEIS that includes an evaluation of an ACEC to be managed as an RNA.
Frank	Bergstrom	frank.b@gci.net	ACEC / 3809 Regulations	BLM is proposing to designate land north of Haines, AK, including the Constantine Palmer Project, as an Area-of-Critical- Environmental-Concern. This would be a revision to the 2008 Ring of Fire Land Plan. Why is it that during the 2008 and 2012 planning processes this area was not so designated, yet when mineral exploration begins to occur – per the land plan - BLM would change the land designation? If land management has simply become the extirpation of any land use other than 'preservation' why bother with land plans at all? BLM 3809 regulations are sufficient to allow development while protecting and even enhancing other resources. Nothing has changed since BLM's 2012 determination that ACEC was and is not needed.
Frank	Bergstrom	frank.b@gci.net	Other Jurisdictions	Additionally, BLM should consider its land management decisions in context with the remaining land ownership mosaic. That is, the impacts of any restrictive land use designations, particularly ACECs, on the surrounding State land, including that held by the AMHT, would be of critical concern. Should ACECs designation end mineral exploration, would not the AMHT lose the opportunity to generate income from its property, which was selected for the exact purpose of revenue generation from mineral extraction for the benefit of mental health programs in Alaska?
Frank	Bergstrom	frank.b@gci.net	Other Jurisdictions	BLM also needs to consider the impacts of ACECs, on the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle Preserve and the Haines State Forest. If not, what is the purpose of such negotiated settlements? Are such agreements just agreements for the 'moment'?

First	Last	Contact Information	Category	Comment
Frank	Bergstrom	frank.b@gci.net	General	This proposed action is obviously being considered as a means to stop mineral exploration. Yet, what impact would it have on other land uses, including recreation, subsistence hunting and fishing, state forestry, and road building and repair? This proposal is ill-conceived and serves a narrow private interest; i.e., that of preservation groups hell bent on ending natural resource development and the associated family wage jobs Alaskans have long enjoyed. Please discard this ill-advised proposed action and continue to apply the existing land use designation.
Mike	Bell	gmbell@gmail.com	Land Use Designation	I attended the public meeting recently held in Haines. I have concerns because the term multiple use was used to describe the BLM lands in the Haines area. All I saw was recreation and conservation. I support multiple use. I also do not see the need to designate any of the land as Area of Critical Environmental Concern. There are thousands of acres of forest in the Chilkat Valley. There is room for heli-skiing, ATV's, mining, subsistence use and other activities. There is no reason to lock any of it up.
Mike	Bell	gmbell@gmail.com	General	Thank you for the opportunity to comment
Harry	Noah	harrynoah@aol.com	General	During the early 1990's Alaska resolved a long standing dispute relative to the mental health trust lands. During that period I was the commissioner of Natural Resources for the state and was involved in the settlement of the legal dispute. As you know the Mental Health Trust was reestablished and lands were identified to go into the newly created trust. Some of the major selections of lands to go into the trust are in the Haines area. As you may know the federal government, at Alaska statehood, designated lands to support mental health programs in Alaska. The recreated trust selected lands that had state mining claims that would come into effect when federal lands were either transferred or federal mining claims were relinquished.
Harry	Noah	harrynoah@aol.com	Land Use Designation	The placement of a more restrictive land classification on lands that could ultimately go to the Mental Health Trust would diminish the Trusts ability to realize value from those lands. This could be considered a "taking" on the part of the federal government. Please consider not adding more restrictive classifications to potential Mental Health Trust Lands.
Howard	Grey	Hgrey@foundex.com	General	Thank you for the opportunity to comment on the recently proposed amendment to the subject RMP. I have been following this since the original plan was being developed and assisted in preparing comments previously. I am relatively familiar with activities in the area and particularly interested in the effects the amendment may have on exploration and mining activities.

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Howard	Grey	Hgrey@foundex.com	Land Use Designation	It would appear that little has changed since BLM's 2012 determination which raised the question of why the additional effort to prepare the amendment was necessary. Mountain goats, recreational use of helicopters for sightseeing and heliskiing were already a factor at that time. The question is why an ACEC is being considered now?
Howard	Grey	Hgrey@foundex.com	3809 Regulations	Initial indications of the 2012 determination were that the BLM's 3809 regulations would suffice and that an ACEC was not needed. Again, it does not appear the conditions looked at would change this determination.
Howard	Grey	Hgrey@foundex.com	Other Jurisdictions	I would suggest that BLM view the proposed ACEC from the standpoint of other land owners in the area including the State of Alaska to make sure it will not adversely affect use and enjoyment of these parties through access restrictions, limitations on use etc.
Howard	Grey	Hgrey@foundex.com	General	Finally, the question to be asked is if this additional study was purposely designed to delay a decision and adversely impact recreational and mining uses. Possibly solutions to most of the issues brought up could have been addressed in consultation with the parties rather than another drawn out public process.
Howard	Grey	Hgrey@foundex.com	General	Again, I appreciate the opportunity comment and hope this matter will be resolved soon.
Jeff	Clark	jfclarkiii@gmail.com	ACEC	Dear Mr. Loranger. This is to register my opposition to imposing an Area of Critical Environmental Concern (ACEC) for the Haines Block Planning Area. The Bureau of Land Management (BLM) made the correct decision in its December 2012 Draft Resource Management Plan Amendment to eliminate the ACEC alternative (See Section 2.7.1, page 18 of the Draft). BLM's 3809 regulations provide adequate protection of environmental resources. Furthermore, the area does not meet the 43 C.F.R. Sec. 1610.7-2 criteria for establishing an ACEC.
Philip	Hooge	National Park Service GBNP		see Jennifer Todd
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	General	My name is Keith Kaiser. I was born in Juneau and am a life long Southeast Alaska resident. I resident 6.25 mile· Mud flay Road and have acreage under development adjacent to the Airkat Airpark on Chilkat Lake Road.
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	ACEC	I am sending this email to oppose an ACEC for any or all the Chilkat Valley. I am in favor of the resource development and aviation of all forms in the Chilkat Valley. I feel that LLC is attempting to influence the BLM into continually reducing my ability to recreate and therefore reducing my family's quality of life here in Haines. Please consider:
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	3809 Regulations	BLM 3809 regulations are sufficient to allow development and protect other resources;
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	General	Nothing has changed since BLM's 2012 deamination that ACEC not needed;

First	Last	Contact Information	Category	Comment
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	Other Jurisdictions	BLM needs to consider the impacts of any restrictive land use designations, particularly ACECs, on the surrounding State land, including that held by the AMHT that is host to a silver-copper-molybdenum-zinc prospect (Nataga Skyline) immediately adjacent to and may extend onto the State-selected BLM lands;
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	Wildlife	The proposed Required Operating Procedure #16 restricting helicopter landings within 0.5 mines of potential goat habitat would unnecessarily preclude helicopter landings and negatively impact the local economy. Flight buffers should be based on observed goats, not potential habitat;
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	Other Jurisdictions	BLM needs to consider the impact of ACEC's, on the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle preserve and the Haines State Forest;
Kieth	Kaiser	PO Box 1406 Haines, Alaska 99827	General	BLM needs to be careful that the ACEC issue is not simply an effort to prevent mining and helicopter recreation.
Mary	Stckler	mstickler1@hotmail.com	ACEC	I oppose the ACEC. I want the mine and I want help-skiing. Our town of Haines is hungry. We can use our resources-OUR land respectively.
Matt	Siebert	mrsiebs@hotmail.com	ACEC	This email is to voice my opposition to placing an "Area of Critical Environmental Concern" over selected mining and recreation enough regulations in place to ensure environmental integrity.
Merrill	Palmer	mipalmer2004@yahoo.com	ACEC	I strongly oppose any ACEC in the Haines Block !
Merrill	Palmer	mipalmer2004@yahoo.com	General	I note that the BLM land is surrounded by the largest parks in the world both in Canada and USA with Glacier Bay and the giant park in BC. on our border. The goats have more habitat then people ! The people of Haines also created a 50,000 acre Chilkat Bald Eagle Preserve and a Haines State Forest that was supposed to allow some natural resources open for development so that the people could be a productive contributing factor in our civilization while protecting wildlife habitat. This was all accomplished by Alaska Legislation Senate Bill 796 for which I was a lobbyist in support of the Bill for both the City and Haines Borough.
Merrill	Palmer	mipalmer2004@yahoo.com	General	In effect the Haines land open for productive development use is sandwiched between huge parks suitable for wildlife protection with only a small land position left for people and industrial production that can only be conducted under very restrictive environmental laws.
Merrill	Palmer	mipalmer2004@yahoo.com	General	I note that the BLM currently has a lawsuit against their permitting of Constantine's Palmer mining project putting even this development opportunity in legal jeopardy and that the entities that brought forth this Lawsuit are the very same people that signed a consensus letter supporting the Eagle and Forest Bill as a solution to resource development yet they oppose Constantine's mining project. In fact my bet is that the intent behind this proposed ACEC for goats as supported by Lynn Canal Conservation is more about stopping the mining project then about protecting goats who as I have stated have currently giant parks for habitat.

First	Last	Contact Information	Category	Comment
Merrill	Palmer	mipalmer2004@yahoo.com	Other Jurisdictions	I also note that the land around the Palmer mine Project has been selected by the State of Alaska and then deeded to the Alaska Mental Health Trust Authority as an asset to be used for funding their community obligations to benefit the poor and health of our society. An ACEC classification for goats as proposed would make all the goals and Federal mandated purposes of the AMHTA an impossible mission. I also note that the land selected by the AMHTA in the Haines Area represents a very large potion of their total State land selection and restrictive laws will adversely effect their social mission.
Mitch	Henning	mwhenningak@msn.com	General	My Name is Mitch Henning, I am a retired Geologist formerly with the Alaska Department of Natural Resources. I have held numerous geological positions with the ADNR. As of my retirement at the end of November 2017, I was the Acting Section Chief for the Mining Section, Division of Mining/Land & Water, Alaska Department of Natural Resources. During my geologic career with the department I was responsible for overseeing many resource projects. The project related to these comments was the Alaska Mental Health Trust Land Settlement. I was tasked to assemble a team of geologists from the Division of Geological & Geophysical Surveys and the Division of Mining.
Mitch	Henning	mwhenningak@msn.com	General	As project lead I was given the task of assembling a small team to review federal lands available for state selection to be included in the Mental Health Trust Land Settlement as mineral replacement lands. The project team selected consisted of myself and colleges Tom Bundtzen and Mark Robinson. An area in southeast Alaska referred to as the Haines block was identified to be included as mineral replacement lands pool for the Mental Health Trust Settlement. The Haines Block was selected for its known and prospective mineral potential for the occurrence of precious metal and base metal deposits. Implementation of an ACEC on adjacent federal lands may directly impact state selected and state lands and the ability of these mineral lands to eventually generate income to the Alaska Mental Health Trust for funding state mental health programs.
Mitch	Henning	mwhenningak@msn.com	General	This action may also impact BLM's ability to finalize conveyance of selected lands to the State of Alaska at some point in time creating potential avenues of litigation by former litigants to the Mental Health Trust lawsuit and Settlement. BLM certainly has the tools under present 3809 regulations to manage these lands in an equitable manner that benefit all parties involved in past litigation and land planning efforts related to the Haines Block. The 1982 consensus agreement between the environmental community and resource interests needs to be honored to protect the integrity and trust of the process and consensus reached and agreed to by all parties.

First	Last	Contact Information	Category	Comment
Mitch	Henning	mwhenningak@msn.com	Other Jurisdictions	In Summary original agreements need to be honored, additional restrictive designations will potentially impact state lands and Mental Health Trust selections, add new layers of restrictions that are presently covered under existing management. As a geologist who was involved in this effort to select lands for the Mental Health Trust Settlement Agreement I strongly oppose any federal action by BLM that may potentially damage the Mental Health Trust Authority and its ability to get conveyance of its selected lands and general income from those lands. Thank You for allowing me to comment on this proposed action.
Ron	Ralston	PO Box 493, Haines AK 99827	Land Use Designation	I support Alternative D (no ACEC or SMRA), retention of the Monitoring and Control Area for five years, an increase in recreational helicopter landings, and rewording of ROP #16.
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	General	The State of Alaska reviewed the news release and other materials provided at the open houses held in April, which indicate the Bureau of Land Management (BLM) is re-opening the planning process for the Haines Block Amendment to the Ring of Fire Resource Management Plan after being placed on hold in 2014 following the release of the Draft Environmental Impact Statement (DEIS). The State submitted comments on June 22, 2009 at scoping and on the DEIS on March 14, 2013, which are incorporated herein by reference. The following supplement the previously submitted comments and represent the consolidated views of state resource agencies.
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	To aid understanding of the potential effects on wildlife resources in the planning area, the Alaska Department of Fish and Game (ADF&G) shared GIS layers depicting modeled high value winter mountain goat habitat and brown bear denning habitat with BLM and the Haines Borough. ADF&G also provided a research report, which directly addresses the implications of mountain goat resource selection for helicopter skiing management in the Haines–Skagway area (White and Gregovich, 2018).
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	Heli-skiing activities can displace mountain goats from preferred wintering habitat during a time when goats are physically and nutritionally stressed (Côté 1996, Hurley 2004, Côté 2013). One study found that mountain goats will avoid areas where back country skiing occurs, even when access is non-motorized (Richard and Côté 2015). Disturbance from heli-skiing is believed to disproportionately affect pregnant females and kids. During winter when access to food is limited by snow pregnant females have the added energetic burden of supporting growing fetuses, and growing kids also have high energetic demands. Disturbance can displace goats from favored habitat resulting in goats expending energy on vigilance and locomotion, often through deep snow, and limit the population through declining reproduction and survival.

First	Last	Contact Information	Category	Comment
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	According to the Northern Wild Sheep and Goat Council (NWSGC) helicopter and industrial activity up to 2,000 m away have been documented to disturb mountain goats. The NWSGC recommends that helicopter activity be kept at least 1,500 m away from occupied/suspected nursery groups or important winter range (Côté et al. 1996, Hurley 2004, Cadsand 2012, Côté et al. 2013). Results of research conducted in northern Lynn Canal indicate that industrial activity should be avoided within an 1,800 m buffer around mountain goat winter habitat (White and Gregovich 2017).
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	Heli-skiing activity also has the potential to disturb denning brown bears and wolverines. A study on Admiralty and Chichagof Islands found that bears denned at elevations ranging from sea level to 1,190 m (mean 604 m) and researchers noted that aircraft traffic may lower the suitability of brown bear denning habitat (Schoen et al. 1986). Disturbance during the denning period can cause den abandonment, which increases energy expenditure and reduces cub survival (Linnell 2000).
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	Wolverines naturally occur at low densities and are prized fur and trophy animals. In Alaska wolverines are born between February and April. Natal dens are usually in snow caves at elevations ranging from 300m to 1,250 m (Magoun & Copeland 1998). Human disturbance has been documented to result in den abandonment (Copeland 1996).
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	ADF&G has developed habitat selection models for wintering mountain goats and denning brown bears using data collected in the Haines area (Crupi unpublished data; White and Gregovich 2018). Those models predict the likelihood of goats and bears using specific locations based on habitat features and allow ADF&G to produce maps showing where high quality wintering or denning habitat is located within the planning area. Using those maps and consistent with research on the distance at which heli-skiing disturbs wintering mountain goats, we recommend a minimum 1,500 m buffer around modeled high-quality mountain goat wintering habitat and high-quality brown bear denning habitat within the Haines Planning area. Werequest that BLM retain the current Monitoring and Control Area which will provide a comparison area for ongoing research.
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	To fully understand the potential effects of heli-skiing on wildlife and to develop appropriate mitigation measures, it is important to accurately characterize the extent of valuable wildlife habitat and landscape features favored for heli-skiing. White and Gregovich (2018) point out that elsewhere in North America partnerships between backcountry users and government agencies have facilitated detailed mapping of areas used by wildlife and recreationalists, and more informed management decisions (Adrus 2005, Cadsand 2012, Olson et al. 2017, Squires et al. 2018).

First	Last	Contact Information	Category	Comment
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	Wildlife	ADF&G provided BLM with GIS layers showing the distribution of modeled high-quality winter mountain goat and brown bear denning habitat. However, without knowledge of landscape features favored by the heli-skiing industry the degree to which winter mountain goat habitat and heli-skiing habitat overlap remains unknown, and ways of mitigating effects of heli-skiing on wildlife cannot be formulated. We encourage BLM to work with heli-skiing operators to collect data on specific locations of ski-runs, landing zones, and flight paths to learn about the true extent of overlap between heli-skiing and important wildlife habitat and to inform mitigation measures.
Susan	Magee	550 W 7th Avenue, Suite 1430, Anchorage AK 99501	General	As discussed in the State's comments on the DEIS, the Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys (DNR/DGGS) has a future need to conduct mineral resource assessments and geologic mapping in most BLM-managed lands in the Haines planning area, as well as helicopter-supported geophysical surveys, geological mapping, and geochemical sampling on state lands. The DEIS did not distinguish between limitations that apply to heli-skiing and other activities that utilize helicopters. Therefore, we are concerned proposed limitations in the DEIS would directly affect these types of activities. See March 14, 2013 comments for additional details. We request the revised DEIS distinguish between the effects of different activities involving helicopter use. For example, the administrative activities conducted by DGGS are distinctly different from recreational activities that involve helicopter use and would not likely occur during the winter season. A helicopter-supported geophysical survey would only need to occur once over the area of interest. We also request shape files of the area where the BLM is considering applying proposed limitations to helicopter use.
Sunny	Sundberg	sunny@seaba-heli.com	General	I would like to start off by saying I am a heliski opertor, and Haines resident. I live and made a living in Haines for the last 18 years. I originally had a SRP from 2002 through 2007. The hiatus of blm land permits from 07-current has impacted my business growth negatively. I feel that the goat study and other delayed actions created by this process were very difficult to work through and put undue hardships on my business and in effect my family.
Sunny	Sundberg	sunny@seaba-heli.com	General	I completely support alternative B. It is sensible and allows for growth heliski and recreational helicopter industries and does not rule out other important economic opportunities in the Haines area. These lands that are in the Skagway and Haines area are part of an economic corridor that supports living near state and federal lands that are capable of be utilized for economy.
Sunny	Sundberg	sunny@seaba-heli.com	3809 Regulations	BLM 3809 regulations are sufficientnand capable of allowing sustainable development while ptotecting existing resources. There are laws and guidlines in place that can protect and serve the publics interest.

First	Last	Contact Information	Category	Comment
Sunny	Sundberg	sunny@seaba-heli.com	Wildlife ACEC	I do not support an ACEC as the population of Mt. Goats is stable, I can get an over the counter goat tag to hunt them above Klukwan.The cultural signifigance to the Tlingit culture is not being harmed, or threatened either. They can and do weave Chilkat Blankets, from Mountain goat that they harvest. As long as populations are managed correctly based on good hunting and game taking strategies, they should have access to this resource in perpetuity.
Sunny	Sundberg	sunny@seaba-heli.com	Noise	The proposed required operating procedure #16 would in effect shut down all helicopter based industries like heliskiing. The reason we have some of the best skiing in the world is becuase of how tight the mountains are here, creating high densities of skiable terrain. Many valleys we have flown through or utilized for heliskiing are less that a half mile wide.
Sunny	Sundberg	sunny@seaba-heli.com	Wildlife	The ADFnG goat study, (White and Gregovich 2018) is based on a partial study of potential goat and denning brown bear habitat. The state told the Haines borough and heliski operators in 2011 that they would deliver areas of critical winter habitat that we could then plan operations around. The idea that all the potential terrain has goats in them at all times is a reach. The only required operation procedure for helicopter should,be visible animals, and 1500 from critical winter kid and nanny populations.
Sunny	Sundberg	sunny@seaba-heli.com	Wildlife	The goat study is only that, an academic atempt to figure out a baseline of a very heathy population of animals through out Haines and Skagway areas.
Sunny	Sundberg	sunny@seaba-heli.com	Wildlife	The ADFNG study does not reference any impacts to goats from heliskiing, nor is [it] a complete document. Many variables where left out, including accurate snow depth reading over the study area for the duration of the study. Goats range and have different wintering habits based on snow depths. Models cannot be accuratly deduced and insighted without this information.
Sunny	Sundberg	sunny@seaba-heli.com	Land Use Designation	I believe that the BLM needs to really be careful not to continue a SRMA or establish or a ACEC based on a small population of residents that are trying to stop mining, heliskiing, and summer helicopter recreation becuase the have a stong opnion against about these industries and potential effects they could have.
Sunny	Sundberg	sunny@seaba-heli.com	Recreation	We recognize that not everyone loves heliskiing, nor do,they understand it. But dislike is no reason to stop a very environmentally sound way to create tourism dollars in a rural community like Haines and Skagway.
Sunny	Sundberg	sunny@seaba-heli.com	Wildlife	With proper planning in for use areas, we can garantee the continued healthy populations will not be reduced by helisoper noise, only other environment health disease, and hunting risks, like the over taking of nannies, can have true and quantitative impacts on these populations. Fish and game management has destroyed herds before by overhunting, when was the last time a goat population was whiped out by helicopters?

First	Last	Contact Information	Category	Comment
Sunny	Sundberg	sunny@seaba-heli.com	General	In conclusion my buiness and the growth of other busnisses need the BLM to give as many landings as possible for helicopter and to be as open with permitting and use. The lamds that Surround the Haines borough are either wilderness, or foreign. We have very little area to make a living from. Use existing laws to keep it from doing irreparable harm, but eith the right management stratedgies and a yes we can attitude I am sure there is room formindustries tomgrow on BLM lands.
Tom	Boutin	b0utin@alaska.net	Land Use Designation, 3809 Regulations	I oppose the proposed amendment to the 2008 Ring of Fire Land Management Plan that could place an "Area of Critical Environmental Concern" over State-selected mining and recreation lands in Haines. That designation would prohibit important resource development. The 2012 Draft Plan Amendment/DEIS BLM analyzed the criteria for ACEC designation and concluded that the Haines Planning Area does not warrant designation as an ACEC. Nothing has changed – existing BLM regulations are entirely sufficient to protect other resources and mitigate impacts from multiple use activities such as mining and recreation.
Tom	Boutin	b0utin@alaska.net	Land Use Designation	The BLM needs to consider the impacts of any restrictive land use designations, particularly ACECs, on the surrounding State land, including that held by the Alaska Mental Health Trust Authority which needs resource development for jobs creation and for income. Moreover, the BLM must consider the impacts of ACEC designation to the integrity of the 1982 Haines Consensus Agreement between environmentalists and resource development proponents that established the Chilkat Bald Eagle Preserve and the Haines State Forest. Finally, I fear that ACEC designation simply constitutes an effort to prevent mining and recreation.
Wayne	Coogan	wdc@cooganalaska.com	General	The letter is well-written; I hope logical-thinking people in Haines see this expression of friendship from Juneau.
William	Heumann	Wheumann@msn.com	Land Use Designation	I wish to comment on the BLM is consideration of an amendment to its 2008 Ring of Fire Land Management Plan. It is my understanding that it may result in the placement of an "Area of Critical Environmental Concern" over State-selected mining and recreation lands in Haines.
William	Heumann	Wheumann@msn.com	ACEC	The 2012 Draft Plan Amendment/DEIS BLM analyzed the criteria for ACEC designation and concluded that the Haines Planning Area does not warrant designation as an ACEC.
William	Heumann	Wheumann@msn.com	General	There is no change that warrants this action and the BLM's regulations already protect other resources and mitigate impacts from multiple use activities such as mining and recreation.
William	Heumann	Wheumann@msn.com	ACEC	I oppose an amendment designating an ACEC in the Haines Block Planning Area.
Kelly	Healy	kelly_healy@temscoair.com	General	TEMSCO is excited to see the Haines amendment get attention this year. We have been operating in Skagway for over thirty years, and always have operated on federal lands.

First	Last	Contact Information	Category	Comment
Kelly	Healy	kelly_healy@temscoair.com	MCA	In 2013, TEMSCO submitted public comment in agreement with the Bureau of Land Management's agency preferred alternative at the time, Alternative D. That alternative allowed time for more research on local wildlife in the monitoring and control area but did not establish an area of critical environmental concern(ACEC). TEMSCO still believes that the criteria to establish an ACEC are not met.
Kelly	Healy	kelly_healy@temscoair.com	Recreation	There are tangible economic benefits to both Skagway and Haines associated with more helicopter usage permitted on BLM administered lands year around. We would like to see the total landings available be raised to 4000 in the North Block (including winter time use). The South Block should also see an increase to avoid congestion between heli-ski operators and help them avoid mountain goat habitat.
Kelly	Healy	kelly_healy@temscoair.com	ACEC	While we think the criteria for and ACEC are not met, we would like to see more studies on local mountain goat populations. The current monitoring control area is an important part of studies and we would like to see it retained for another 5-10 years. We do, however believe that it could be a smaller area.
Kelly	Healy	kelly_healy@temscoair.com	General	Thank you for the opportunity to comment on this matter, and I look forward to seeing the alternatives put forth by the BLM.
Mike	Wilson	mwilson@coastalhelicopters.com	General	I would like to thank you for the opportunity to comment on the proposed changes to the 2012 Draft Amendment to the Ring of Fire Management Plan .
Mike	Wilson	mwilson@coastalhelicopters.com	Land Use Designation	We support Alternative D (no ACEC and increase of helicopter landings to 6,000 annually).
Mike	Wilson	mwilson@coastalhelicopters.com	ACEC	Since the 2012 determination that an Area of Critical Environmental Concern is not needed for the Haines area, nothing has changed. The existing BLM regulations are sufficient to protect existing resources and mitigate impacts from multiple use activities such as mining and helicopter recreation.
Mike	Wilson	mwilson@coastalhelicopters.com	Noise	The current Required Operating Procedure (ROP) #16 restricts helicopter landings within one-half mile of potential goat habitat. This wording in the ROP unnecessarily precludes helicopter landings and negatively affects the local economy. Flight buffers should be based on obsetved wildlife not on potential habitat. The wording of the ROP should be changed to address actions when wildlife is obsetved instead of planning to avoid all potential areas of wildlife use.
Mike	Wilson	mwilson@coastalhelicopters.com	Land Use Designation	the issuance of the ACEC being used as a tool to restrict the use of public lands for resource development and recreation where there is no documented justification that the Haines area meets the requirements of 43 1610.7.2?

First	Last	Contact Information	Category	Comment
Sean	Brownell	helikialaska@gmail.com	General	Hi, my name is Sean Brownell and I have been operating a heliski business in Alaska since 1995. I have been living in haines and operating Heliski tours here since 2001. The name of My business is Alaska Heliskiing. I am married, have a Home and three children in school in haines and Heliskiing is how I support my family. I'm hopeful that the BLM allows a sustainable Heliskiing program on BLM lands here in Haines so I may have success with my business.
Sean	Brownell	helikialaska@gmail.com	Land Use Designation	I support alternative B as it is fair and will accomodate recreational helicopter business in Haines.
Sean	Brownell	helikialaska@gmail.com	ACEC	I an ACEC. We have been Heliskiing in Haines for nearly 20 years and there has been no significant impact on the Mountain goat population in Haines. The goats remain unaffected by the activity and that is because we have operated with the mindset of respecting these animals and have maintained vertical and horizontal clearance of at least 1500 feet from all visible wildlife. It should also be noted that skiers and goats do not share the same habitat.
Sean	Brownell	helikialaska@gmail.com	Noise	Operating procedure #16 would end the commercial Heliskiing business that has done well in haines because it eliminates most of our skiing terrain.
Sean	Brownell	helikialaska@gmail.com	Wildlife	The ADFnG goat study, (White and Gregovich 2018) is based on a partial study of potential goat and denning brown bear habitat. The state told the Haines borough and heliski operators in 2011 that they would deliver areas of critical winter habitat that we could then plan operations around. Actual habitat needs to be identified instead of saying the animals could be everywhere at anytime. The study merely points at possible habitat with generalized characteristics and needs refinement. The model is missing a lot of information that would help pinpoint crucial habitat. Since we've been operating under the minimum flight distances if 1500 feet since 1995 and there has been no measureable effect on mountain goats in the haines area it makes sense to continue under these requirements as it is working for both goats and operators.
Sean	Brownell	helikialaska@gmail.com	Wildlife	I would love nothing more than to continue operating my heliski company in haines with regulations that allow it to succeed. Please consider my request to identify actual crucial habitat as opposed to a blanketing the entire heliski area as a no fly zone.
Nancy	Murkowski	nrgdc@earthlink.net	General	As a former Governor of Alaska and twenty two years in the US Senate for Alaska, I find it outrageous that the BLM would entertain such input from extreme environmental groups who would deprive our State by prohibiting the development of this mine. The objections on the project are based on emotion and are void of any sound science.
Nancy	Murkowski	nrgdc@earthlink.net	General	It is time Alaskans made their own decisions on resource development in our own State.

APPENDIX B: SPECIAL RECREATION MANAGEMENT AREA MATRIXES,

Haines North Block Special Recreation Management Area Matrix

Primary Market Strategy	Primary Market
Undeveloped	Tourists seeking organized/guided excursions provided by commercial recreation businesses for the purpose of sightseeing in a remote and undeveloped natural setting.

NICHE

The primary niche for this area involves organized flight excursions provided by commercial recreation businesses along with limited opportunities for independent recreation use and exploration.

MANAGEMENT OBJECTIVES

The established management objectives for the Haines SRMA includes: 1) manage the SRMA to maintain a diversity of opportunities, including designated Recreation Opportunity Spectrum classification, 2) maintain the area for designated Visual Resource Management classification, 3) develop further guidance for management of OHV use, 4) manage commercial recreation activities to maintain the quality of user experience, avoid adverse effects on wildlife resources, and minimize disturbance to adjacent communities, and 5) work collaboratively with other landowners in the area, recreation users, and adjacent communities to develop management strategies and define enforcement responsibilities.

PRIMARY TARGETED OUTCOMES

Activities	Experiences	Benefits
Primary: • sightseeing • photography **Secondary:** • hiking • camping • hunting • ice climbing	**Primary:** • experience of a natural landscape • improved appreciation of nature's splendor • enjoying having access to natural landscapes **Secondary:** • escaping crowds • experiencing adventure • relishing group affiliation and togetherness • enjoying closeness of friends and travel companions	**Personal:** • greater connection with nature • improved mental health • enjoy risk-taking adventure • enjoying participating in group outdoor events • environmental learning **Community/Social:** • heightened awareness of natural world • reduced social isolation • greater interaction with visitors from different cultures **Environmental:** • increased awareness and protection of natural landscape **Economic:** • improved local economic stability • more positive contributions to local-regional economy • increased local tax revenues from visitors • increased local job opportunities • enhanced ability for visitors to find areas providing wanted recreation experiences and benefits • maintenance of community's distinctive recreation-tourism market niche or character • increased property values

Haines Block Special Recreation Management Area - continued

SETTING CHARACTER	
Physical	**Remoteness:** The large remote area contains no roads or trails. The closest road access to the SRMA is at the end of a gravel road located approximately five miles away.
Social	**Contacts:** Concentration of users, other than organized excursions, is rare and evidence of other users is minimal.
Administrative	**Mechanized Use:** Access to the roadless area occurs through fixed-wing aircraft and helicopters.
SETTING CHARACTER	
Physical	**Naturalness:** The large area is an unmodified natural environment. Sights and sounds of any road system are non- existent. **Facilities:** None.
Social	**Group Size:** Group size from organized excursions usually averages less than 20 people. **Evidence of Use:** Landscape alterations are generally present and may attract attention. Well-worn soils and vegetation, often gravel surfaced for erosion control.
Administrative	**Management Controls:** Terms and conditions are developed and enforced for Special Recreation Permits authorized for organized excursions. There are no on-site controls with minimal regulatory constraints for dispersed recreation use. **Visitor Services:** The area contains no facilities or any type of visitor services. Office personnel are located over 500 miles by air and over 730 miles by road and therefore are not available.
IMPLEMENTATION FRAMEWORK	
Management	• Provide users of this area with a front country experience through: • Providing readily available access by potentially constructing roads and/or trails. • Developing hiking and camping facilities such as trailheads, roads, trails, interpretive and informational signs, and camp sites. • Providing on-site visitor services by office personnel. • Providing family and group opportunities for local community • Providing off-highway vehicle opportunities.
Marketing	• Developing regulatory constraints and area rules for visitor use. • Increase law enforcement presence. • Provide outreach to market the area to the tourism industry as well as to locals industry seeking a front country experience by ensuring accurate information supporting stated resource management area objectives. • Develop an established relationship with stakeholders with an emphasis on achieving and maintaining the primary benefits; greater connection with nature, improved mental health, enjoy risk-taking adventure, enjoying participating in group outdoor events, and environmental learning.
Monitoring	Monitor and evaluate visitor satisfaction, including niche decisions, targeted outcomes, and setting character decisions, based on stated recreation management area objectives.

Haines Block Special Recreation Management Area - continued

IMPLEMENTATION FRAMEWORK	
Administrative	Apply administrative actions as needed to maintain identified outcome experiences. • OHV designation = limited motorized use • Travel Management o Restrictions Allowed Uses: ▪ All forms of non-motorized use are generally allowed, including horses and mountain bikes. ▪ ATV's and UTV's with a 2000 pound Gross Vehicle Weight Rating (GVWR) or less on designated roads and trails only. Travel off of designated roads/trails allowed only to retrieve legally harvested game. ▪ Roads and trails would be added as they are identified or designed and constructed by BLM in a sustainable fashion. ▪ Winter use of snowmachines only when there is adequate snow cover, generally 6-12 inches or more, or a combination of snow and frost depth sufficient to protect the underlying vegetation and soil. ▪ Aircraft are generally unrestricted, unless the activities fall within the parameters of requiring a Special Recreation Permit. Construction or improvement of landing areas by permit only. Minimal clearing of rocks, downed logs and brush is allowed. • Manage as VRM class IV • Majority of area will be managed under the ROS class of *primitive*. • Minerals will not be withdrawn from entry. • SRP's will be issued in conformance with BLM guidance • New restrictions and/or visitor amenities could be developed for the purposes of site protection, visitor safety and enhancing recreational opportunities within a special management area.

Extensive Recreation Management Area Template

Haines Block Extensive Recreation Management Area (ERMA)

ERMAs are administrative units that require specific management consideration in order to address recreation use, demand, and/or recreation and visitor services program investments. ERMAs are managed to support and sustain the principal recreation activities and the associated qualities and conditions. ERMA management is commensurate with and considered in context with the management of other resources and resource uses.

ERMA OBJECTIVE(S) DECISION

ERMA objectives must define the recreation activities and the associated qualities and conditions that become the focus for recreation and visitor services management.

Objective Statement Provide a setting for backcountry recreation activities, consisting primarily of hiking, skiing, and hunting opportunities, while meeting demand for increased commercial recreation opportunities consisting primarily of aviation related special recreation permits.

Increase landings for permitted commercial recreation opportunities if goat populations are stable, operators demonstrate a need for increased landings, and an 75% utilization rate of previously permitted landings is achieved.

Through user survey ensure at least 85% of backcountry users are fulfilling their planned objectives and experiences on BLM lands.

MANAGEMENT ACTIONS AND ALLOWABLE USE DECISIONS

Identify management actions and allowable use decisions for the recreation and visitor services and other programs necessary to: facilitate visitor participation in the identified outdoor recreation activities; maintain particular recreation setting characteristics; address visitor health and safety, resource protection, and use and user conflicts.

Recreation and Visitor Services Program

- Manage commercial recreation activities to maintain the quality of user experience while avoiding adverse effects to Mountain Goats.
- Process and issue special recreation permits to meet demand for commercial recreation activities within the area.
- Minimal recreation and visitor services will be provided to maintain primitive and backcountry setting classes for the physical, social, and operational setting components.
- No land designation would apply to lands outside of the SRMA under Alternative A.
- ERMA designation would include all lands outside of the ACEC under Alternative E.
- ERMA designation would include all lands under Alternative F.
- ERMA designation would include all lands outside of SRMA under Alternative G.

Other Programs (e.g., stipulations on mineral or other development, OHV designations, visual resource management classes):

- Maintain VRM Class IV.
- OHV's will be managed as "Limited". Use will be limited to existing roads and trails consistent with the State of Alaska Generally Allowed Uses on State Lands, which, among other things, requires OHV's to stay on existing trails when possible.
- Lifting of Monitoring and Control Area (MCA) except within Alternative A
- Establishment of an ACEC (Alternative E).

Haines Block Extensive Recreation Management Area (ERMA) – continued

IMPLEMENTATION DECISIONS (analyzed in LUP) or IMPLEMENTATION GUIDANCE (additional NEPA required)
Implementation decisions are actions to achieve or implement land use plan decisions.
Management: (e.g. roads, trails, facilities, use restrictions, services, concessions.) • Minimal management actions would occur within this ERMA *Administration: (e.g. permits, fees, allocation systems, partnerships)* *Implementation Decision analyzed within the Haines Supplemental Environmental Impact Statement:* Establish a maximum number of authorized annual helicopter supported landings. • Alternative A 300 winter (South Block only), 2400 summer (North Block only, excluding the Monitoring and Control Area). • Alternative E 300 winter (South Block only), 2400 summer (North Block only). • Alternative F 3000 winter, 3000 summer, lifting of Monitoring and Controlled Use Area after 5 years. • Alternative G up to 5500 winter, 5500 summer through adaptive management process and incremental increase. *Information and education: (e.g. maps, brochures, websites, interpretation, environmental education.)* • Minimal information and education actions would occur within this ERMA *Monitoring: (e.g. visitor use, satisfaction, demand, OFM monitoring.)* • Visitor use survey of backcountry users may occur. Annual coordination, reporting, and follow up may occur for commercial operators beyond required 2930 permit procedures.

Chilkat Mountains Special Recreation Management Area

SUPPORTING INFORMATION

The Chilkat Mountains SRMA provides a unique setting to participate in wildlife dependent recreation activities and backcountry recreation opportunities. In contextual comparison to the rest of Southeast Alaska the SRMA is relatively accessible from road, air, and water yet offers an undisturbed and unfragmented land base providing for outstanding mountain goat habitat and world class backcountry experiences. The SRMA designation would allow for active cooperation with Alaska Department of Fish and Game for goat habitat and populations, recognition of goat hunting and associated activities as traditional uses, preservation of backcountry recreation pursuits, and enhancement of recreation management or visitor services in support of the SRMA.

SRMA/RECREATION MANAGEMENT ZONE (RMZ) OBJECTIVE(S) DECISIONS

Objective Statement: Provide for world class backcountry hunting, recreational viewing experiences of mountain goats, and supporting backcountry activities in an undisturbed and unfragmented habitat. In future surveys/assessments it is desired that users of the SRMA report an average 4.0 realization (4.0 on a probability scale where: 1 = not at all realized to 5 = totally realized) of the targeted experiences and benefits listed below.

Activities

- Mountain Goat Hunting
- Wildlife Viewing
- Backcountry Camping

Experiences

- Depending on and utilizing a wild game resource in support of traditional use through traditional means
- Enjoying a physically and mentally challenging recreation experience in a rugged environment
- Sharing an outdoor adventure with family and friends
- Viewing an array of wildlife in a natural setting
- Testing or demonstrating skills required for successful navigation and traversal of a backcountry environment
- Testing equipment and gear in a harsh environment
- Participating in outdoor recreation pursuits in an undisturbed and natural setting

Benefits (e.g., personal/individual, community/social, economic, and/or environmental):

Personal

- Enhanced relationship with the natural world
- Increased ability to provide sustenance for friends or family
- Improved self-confidence and skills in back country travel
- Increased physical fitness and stamina
- Decreased levels of personal stress or physical ailments

Community/Social

- Maintained supply of traditional foods for community or family
- Stronger ties with community and family
- Increased recognition of hunting as a traditional use on public lands
- Greater appreciation for public lands

Chilkat Mountains Special Recreation Management Area - continued

SRMA/RECREATION MANAGEMENT ZONE (RMZ) OBJECTIVE(S) DECISIONS

Benefits (e.g., personal/individual, community/social, economic, and/or environmental):

Economic

- Enhanced local tourism revenue
- Increased opportunity for small business (such as guides, outfitters, transporters, eco-tourism, concessionaires) to earn a living on public lands by utilizing working landscapes.
- Greater recognition of the area as a recreation destination

Environment

- Enhanced recognition of natural landscapes, wildlife, and habitat which support the local community

RECREATION SETTING CHARACTERISTIC DESCRIPTIONS

Physical Components (e.g., remoteness, naturalness, visitor facilities): The SRMA would retain the current level of remoteness overall. The existing natural landscape is mostly retained with a few temporary structures, camps, or cabins in support of traditional or recreational use. Simple/basic recreation developments such as parking lots, kiosks, tables, or restrooms may be created along the Haines road system.

Social Components (e.g., contacts, group size, evidence of use):

a. **Contacts (with other groups) -** Primary use season is September 15 through November 15. During this time period users should contact no more than 2 other user groups per day.
b. **Group Size:** Throughout the entire SRMA users should expect to encounter groups consisting of 2 individuals on average with the possibility of larger groups of 3-5 during the summer months.
c. **Evidence of Use:** Area of very minimal disturbance (micro trash, scatted rocks, fire rings) can expect to be encountered on ridgetops or routes within one day proximity to the Haines highway or river valleys. Prominent ridgetops or areas in close proximity to high goat populations may also demonstrate minimal signs of use such as rock shelters, rifle cartridges, or micro trash.

Operational Components (e.g., access (types of travel), visitor services/information, management controls):

Public Access: Currently routes to and within the SRMA are not maintained and undefined. Future designation, construction, or maintenance of motorized and non-motorized routes will be considered. OHV use within the SRMA is limited to existing or designated routes. No helicopter supported special recreation permits will be issued within the SRMA. Fixed wing access and special recreation permits related to fixed wing access are allowed.

Chilkat Mountains Special Recreation Management Area - continued

MANAGEMENT ACTIONS AND ALLOWABLE USE DECISIONS

Identify necessary management actions and allowable use decisions for recreation and visitor services and other programs to achieve SRMA/RMZ objectives and maintain or enhance the desired recreation setting characteristics.

Recreation and Visitor Services Program (e.g., planning-area wide camping limits, restrictions on shooting sports. Note that many recreation management actions fall under implementation decisions described below).

Special Recreation Permits

- Helicopter supported special recreation permits or special recreation permits utilizing unmanned aerial vehicles (drones) are not permitted within the SRMA.

Camping Restrictions

- 14 consecutive day camping limit on SRMA lands year round.
- Camping and overnight use is prohibited at 7 Mile Haines Highway and Dalton Cache BLM lands.

Comprehensive Trails and Travel Management

- The area is classified as limited to existing or designated routes. The steep topography and terrain generally prevents the use of OHV's with current technological capabilities.

Visual Resource Management

- The SRMA is classified as VRM Class IV and managed under VRM Class IV objectives.

Other Programs (e.g., stipulations on mineral or other development, OHV designations, visual resource management classes):

Lands and Realty:

- ROW which do not negatively affect the objective statement for the SRMA will be considered.
- Surface occupancy or use will be avoided in high use Mountain Goat habitat in the winter months.
- Land uses previously permitted or analyzed under the Ring of Fire RMP will continue.
- Future lands acquired, through relinquishment of state selected lands or other means, attached to the Haines road system or bordering the SRMA would be included within the SRMA. Future lands acquired not meeting those two parameters would become part of ERMA lands.

Non-energy Solid Mineral Leasing, Salable Minerals/Mineral Material Disposal

Subject to valid existing rights identified within the Ring of Fire RMP and as permitted through Federal Regulations, FLPMA, and other authorities.

Chilkat Mountains Special Recreation Management Area - continued

IMPLEMENTATION DECISIONS (analyzed in LUP) or IMPLEMENTATION GUIDANCE (additional NEPA required)

Implementation actions achieve or implement land use plan decisions.

Management: (e.g. roads, trails, facilities, use restrictions, services, concessions.)

The below actions are considered Implementation Guidance which will require further NEPA actions.

- Over snow travel and cross country travel in support of recreation use is allowed if sufficient snow cover (12" or greater) or sufficient ground frost (6" or deeper) is present.
- The use of unmanned aerial vehicles (drones) in support of non-commercial activities is allowed.
- Fixed wing access is allowed.
- The use of fixed wing, unmanned aerial vehicles, or helicopters for transportation, exploration, or development of mining activities is a valid existing right and is not subject to any limitations defined within the SRMA.
- Special recreation permits utilizing over snow travel would not be allowed.
- Other special recreation permits will be considered if they support the objective statement of the SRMA.
- The BLM would give consideration to future motorized or non-motorized access routes.
- Visitor facilities would be considered along the road system near the SRMA or on lands acquired in the future near or within the SRMA. Backcountry cabins may be considered by the BLM within the SRMA.
- Temporary structures and camps in support of traditional or recreational use would be permitted.

Administration: (e.g. permits, fees, allocation systems, partnerships)

- The below actions are considered Implementation Decisions and were analyzed in the Haines Supplemental Environmental Impact Statement.

Establish a maximum number of authorized annual helicopter-supported recreation landings.

- Alternative A 300 winter (South Block only), 2400 summer (North Block only, excluding the Monitoring and Control Area).
- Alternative E 300 winter (South Block only) 2400 summer (North Block ERMA lands only).
- Alternative F 3000 winter, 3000 summer, lifting of Monitoring and Control Area after 5 years.
- Alternative G up to 5500 winter, 5500 summer through adaptive management process and incremental increase.

Information and education: (e.g. maps, brochures, websites, interpretation, environmental education.)

- Basic safety information may be developed at access points. Detailed maps and other information can be obtained online and at local offices.

Monitoring: (e.g. visitor use, satisfaction, demand, OFM monitoring.)

- Monitoring may occur every 5-8 years to measure attainment of objectives and assess impacts to wildlife and other resources.

APPENDIX C: Haines Block ACEC Nominations –

Haines Block ACEC Nominations – Ring of Fire Resource Management Plan Amendment Background:

During public comment periods for the Supplemental Ring of Fire Resource Management Plan Amendment, several nominations were submitted for Areas of Critical and Environmental Concern (ACEC) within the planning area. The areas considered and evaluated include the Upper Chilkat River drainage, the Monitoring and Control Area (MCA), the Dyea Uplands, the Nourse Glacier Moraine, Mt. Harding and the entire BLM managed Haines Planning Area, which are analyzed in the tables below.

Since the 2012 Draft RMP Amendment, additional wildlife data and analysis have become available. Additionally, detailed public comments were received in 2018, from multiple parties. These comments identified the 2002 designated MCA as the location for an ACEC focused on mountain goats and cultural importance, while another comment identified the Takshanuk Mountains and MCA as the location for a similar ACEC.

The following are rationale provided for the ACEC nomination:

"The Mountain Goat Monitoring and Control Area contains an important mountain goat resource that is sensitive to human disturbance. This resource has special worth and is more than locally significant because naturally occurring mountain goat populations on BLM managed lands nationwide have become scarce. Additionally, research completed in 2011 and 2012 by Dr. Aaron Shafer shows these goat populations are genetically unique, and therefore "irreplaceable". Creating an ACEC managed as an RNA inside the Monitoring and Control Area would allow the special management needed to protect those goats from expanding helicopter-supported recreation."

"The current Monitoring and Control Area, as the only area in the Haines Block "where helicopter supported recreation has not occurred" (BLM 2018 handout), is the perfect area for an RNA."

"…we cannot choose options A, B, C, D, E, or X as none of them address our tribal concern of protecting Chilkat Indian Village's Culturally significant sites which include Monitor and Control Area used for goat and bear denning studies. Therefore, we request an additional option that will protect our culturally significant sites on and around the Takshanuk Mountain."

In light of new information, public comments and Government-to-Government consultation, an area similar to the area of the current MCA was identified as meeting the relevance and importance criteria as necessary to be considered as a potential ACEC and carried forward in a RMP alternative. The proposed ACEC modified the current MCA boundary to incorporate additional acres of land on Takshanuk Mountain while realigning the eastern boundary with low-lying center of drainage rather than ridge tops. The BLM recognized, based on a review of available literature, that low-lying drainages were more biologically appropriate geographical features to base management boundaries upon as mountain goats are less likely to cross major drainages as opposed to ridgelines.

Historically, this northern stretch of the Chilkat River above its confluence with the Kelsall River was reported to be the major source of mountain goats for the Chilkat Tlingit tribe (Goldschmidt and Haas 1998:32-33). This modified boundary also incorporates additional lands in the Takshanuk Mountains above Klukwan Village that have been identified as being a place of traditional cultural importance.

Additionally, the realignment of the eastern boundary still incorporates the four different geographic areas that were included in the MCA with all three elevational mountain goat wintering strategies represented (i.e., low, medium, high).

Name of Proposed ACEC: Upper Chilkat River Traditional Use Area
Nominators:
Southeast Alaska Conservation Council, Sierra Club Alaska Chapter, Alaska Rainforest Defenders, Alaska Wildlife Alliance, Alaska Quiet Rights Coalition, Lynn Canal Conservation Inc, Chilkat Indian Village

Description of the area:
The proposed ACEC is located in the Upper Chilkat River drainage and includes geographic features such as Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, Mount Raymond and portions of the upper Chilkoot River to the east. Predominant vegetative communities include western hemlock and Sitka spruce coniferous forest with mixed- conifer muskegs and deciduous riparian forests. Above the shrub zone, slopes are dominated by alpine tundra and herbaceous, grass covered areas. Higher elevations include sparsely vegetated ridgelines, rock cliffs and spires and/or glacier ice fields. Avalanche chutes are common and bisect most plant community types.

Large mammals inhabiting the area include moose, brown and black bears, wolves, wolverine, coyotes and mountain goats.

Mountain goat winter range occurs throughout much of the proposed area with goats selecting different elevational wintering strategies, often influenced by distance from the coast. A lower elevation winter strategy is most common near the coast and least common further inland with a stronger interior climatic influence (White, 2018). Local variation does exist, however, all three elevational wintering strategies (low, medium, high) are utilized in multiple geographic regions, including the Takshanuk and Chilkoot-Ferebee.

For much of the proposed area, winter habitat is more spatially limited than summer habitat. Summer habit selection closely resembles a high elevation wintering strategy as mountain goats select for mid-slope or ridgetop areas in close proximity to cliffs (White, 2018).

Does area meet Relevance Criteria:
Wildlife:
The proposed area meets the relevance criteria as it contains mountain goat habitat essential to the maintenance of mountain goat diversity. Extensive research has been conducted on both mountain goat habitat requirements and genetic differentiation within the proposed ACEC area. Research within the last decade has shown mountain goats in the Haines and Skagway area to be genetically unique and harbor the descendants of a refugial population that survived the last glaciation in southeast Alaska (Shafer et al. 2011). Sustaining genetic diversity is vital for a species ability to cope with future environmental change.

Cultural:
The proposed area contains a significant cultural resource in the form of mountain goats, which have provided wool to Chilkat Tlingit weavers for hundreds of years. The wool is used to create “Chilkat Blankets,” which are an iconic Tlingit art form that is tied to their cultural, clan, moiety and village identities (Hotch 2014). The blankets are used primarily during ceremonies and dances by high ranking members of the village (Emmons 1991:227).

Does area meet Importance Criteria:

Wildlife:

The area meets the importance criteria because it provides habitat for mountain goat populations which may be fragile or sensitive to human activities, irreplaceable or unique and/or vulnerable to adverse change.

Among North American large mammal species, mountain goats are particularly sensitive to human disturbance (Côté 1996) and exhibit heightened sensitivity to aerial disturbance such as helicopters and fixed-wing aircraft (Foster and Rahs 1983, Côté 1996, Goldstein et al. 2005, Cadsand 2012, Côté et al. 2013, White and Gregovich 2018). Additionally, cold adapted alpine species, such as mountain goat, are especially sensitive to changing climates.

Furthermore, research suggests mountain goats of the four geographic regions within the area are part of refugial populations surviving through the last glaciation. The area identified is more than locally significant as it includes mountain goat populations of refugial decent that have not been previously impacted by permitted aviation activities such as heli-skiing, flight seeing tours and glacier landings.

Cultural:

The area has more than locally significant qualities because “Chilkat Blankets” made from mountain goat wool have importance beyond the local Chilkat tribe. It is an art form that is ceremonially important throughout the Tlingit, Haida and Tsimshian peoples of Southeast Alaska, who all once made blankets of this type from mountain goat wool (Emmons 1991:224). But, it was only in this area that the blankets were made in later historic times and became synonymous with the Chilkat Tlingit.

Additionally, as an art form dependent on mountain goat wool, the complex weaving of “Chilkat Blankets” or “Naaxéin” has become rare among the Tlingit, with only a few traditional weavers still practicing the art (Hotch 2013). In the past, a skilled weaver could take up to six months to complete a single blanket and traditionally required three mountain goats to provide the wool (Emmons 1991:224-227). A recent resurgence in the weaving of the blankets in the village of Klukwan resulted in the creation of the “Klukwan Healing Robe,” which took eight years and several weavers to complete (Hotch 2013). This blanket was based on the historic “Ravenstail Blanket,” which originated from the Lynn Canal area, and was recreated as a project because of the desire of local weavers to restore the art of weaving “Chilkat Blankets.”

Findings:

The Upper Chilkat River Traditional Use Area ACEC nomination meets the relevance and importance criteria for its mountain goat and cultural resource significance and therefore should be carried forward for additional analysis and consideration in the Draft RMP Amendment/Supplemental DEIS.

Citations:

Cadsand, B. A. 2012. Responses of mountain goats to heliskiing activity: Movements and resource selection. Master's thesis. University of Northern British Columbia, Prince George, B. C.

Côté, S. D. 1996. Mountain goat response to helicopter disturbance. Wildlife Society Bulletin 24:681–685.

Côté, S. D., S. Hamel, A. St-Louis, and J. Mainguy. 2013. Do mountain goats habituate to helicopter disturbance?. Journal of Wildlife Management 77:1244–1248.

Emmons, G. T. 1991. The Tlingit Indians. Edited by Frederica de Laguna. Seattle and London: University of Washington Press.

Foster, B. R., and E.Y. Rahs. 1983. Mountain goat response to hydroelectric exploration in northwestern British Columbia. Environmental Management 7:189–197.

Goldschmidt, W.R., and T.H. Haas. 1998. Haa Aaní Our Land Tlingit and Haida Land Rights and Use. Edited by Thomas F. Thornton. Seattle and London: University of Washington Press.

Hotch, L 2013. The Klukwan Healing Robe. Klukwan, AK: Klukwan Community and School Library.

Hotch, L 2014. Jilkaat Héeni Naaxein (Chilkat River Woven Robe). Klukwan, AK: Klukwan Community and School Library.

Goldstein, M. I., A. J. Poe, E. Cooper, D. Youkey, B. A. Brown, T. McDonald. 2005. Mountain goat response to helicopter overflights in Alaska. Wildlife Society Bulletin 33:688–699.

Shafer, A.B.A., Côté, S.D. & Coltman, D.W. 2011. Hot spots of genetic diversity descended from multiple Pleistocene refugia in an alpine ungulate. *Evolution*, 65, 125– 138.

White, K. S. & Gregovich, D. 2018. Mountain Goat Resource Selection in the Haines–Skagway Area: Implications for Helicopter Skiing Management. Juneau, AK: Alaska Department of Fish and Game, Division of Wildlife Conservation.

ACEC Evaluation Table	Upper Chilkat River Traditional Use Area (See previous eval)
General Location:	Approximately 18 miles northwest of Haines, AK
General Description:	The proposed ACEC is located in the Upper Chilkat River drainage and includes geographic features such as Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, Mount Raymond and portions of the upper Chilkoot River to the east. With consideration of the ACEC nominations, through public comment and Government-to- Government consultation, an ACEC boundary was drafted. Working from the boundaries of the 2002 designated MCA, additional acres of land on Takshanuk Mountain were incorporated while the eastern boundary was realigned at the low-lying center of drainages rather than ridgelines. It was identified that low-lying drainages were more biologically appropriate geographical features to base management boundaries upon as mountain goats are less likely to cross major drainages as opposed to ridgelines. Additionally, this northern stretch of the Chilkat River above its confluence with the Kelsall River was reported to be the major mountain goat hunting area for the Chilkat Tlingit tribe (Goldschmidt and Haas 1998:32-33). This modified boundary also incorporates additional lands in the Takshanuk Mountains above Klukwan Village that have been identified as being a place of traditional cultural importance. Finally, the realignment of the eastern boundary still incorporates the four different geographic areas that were included in the MCA with all three elevational mountain goat wintering strategies represented (i.e., low, medium, high).
Acreage:	Approximately 78,000 acres.
Values Considered:	Comments, such as those below, were received requesting that the area of the MCA, or areas nearby, be considered as an ACEC due to its wildlife values and traditional cultural importance: *"The Mountain Goat Monitoring and Control Area contains an important mountain goat resource that is sensitive to human disturbance. This resource has special worth and is more than locally significant because naturally occurring mountain goat populations on BLM managed lands nationwide have become scarce. Additionally, research completed in 2011 and 2012 by Dr. Aaron Shafer shows these goat populations are genetically unique, and therefore "irreplaceable". Creating an ACEC managed as an RNA inside the Monitoring and Control Area would allow the special management needed to protect those goats from expanding helicopter-supported recreation."* *"The current Monitoring and Control Area, as* ***the only area*** *in the Haines Block "where helicopter supported recreation has not occurred" (BLM 2018 handout), is the perfect area for an RNA."*

ACEC Evaluation Table	Upper Chilkat River Traditional Use Area (See previous eval)
Values Considered:	*"…we cannot choose options A, B, C, D, E, or X as none of them address our tribal concern of protecting Chilkat Indian Village's Culturally significant sites which include Monitor and Control Area used for goat and bear denning studies. Therefore, we request an additional option that will protect our culturally significant sites on and around the Takshanuk Mountain."*
Nominator:	Southeast Alaska Conservation Council, Sierra Club Alaska Chapter, Alaska Rainforest Defenders, Alaska Wildlife Alliance, Alaska Quiet Rights Coalition, Lynn Canal Conservation Inc, and the Chilkat Indian Village
Relevant Value: 1. A significant historic, cultural, or scenic value	**Does the nominated ACEC contain the described relevant value?** Cultural: Yes The proposed area contains a significant cultural resource in the form of mountain goats, which have provided wool to Chilkat Tlingit weavers for hundreds of years. The wool is used to create "Chilkat Blankets," which are an iconic Tlingit art form that is tied to their cultural, clan, moiety and village identities (Hotch 2014). The blankets are used primarily during ceremonies and dances by high ranking members of the village (Emmons 1991:227).
Relevant Value: 2. A fish or wildlife resource	**Does the nominated ACEC contain the described relevant value?** Wildlife: Yes The proposed area meets the relevance criteria as it contains mountain goat habitat essential to the maintenance of mountain goat diversity. Extensive research has been conducted on both mountain goat habitat requirements and genetic differentiation within the proposed ACEC area, thus highlighting the relevant value.
Relevant Value: 3. A natural process or system	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 4. Natural Hazards	**Does the nominated ACEC contain the described relevant value?** N/A
Important Value: More than locally significant	**Does the nominated ACEC contain the described important value?** Cultural: Yes The area has more than locally significant qualities because "Chilkat Blankets" made from mountain goat wool have importance beyond the local Chilkat tribe. It is an art form that is ceremonially important throughout the Tlingit, Haida and Tsimshian peoples of Southeast Alaska, who all once made blankets of this type from mountain goat wool (Emmons 1991:224). But, it was only in this area that the blankets were made in later historic times and became synonymous with the Chilkat Tlingit.

ACEC Evaluation Table	Upper Chilkat River Traditional Use Area (See previous eval)
Important Value: More than locally significant	Additionally, as an art form dependent on mountain goat wool, the complex weaving of "Chilkat Blankets" or "Naaxéin" has become rare among the Tlingit, with only a few traditional weavers still practicing the art (Hotch 2013). In the past, a skilled weaver could take up to six months to complete a single blanket and traditionally required three mountain goats to provide the wool (Emmons 1991:224-227). A recent resurgence in the weaving of the blankets in the village of Klukwan resulted in the creation of the "Klukwan Healing Robe," which took eight years and several weavers to complete (Hotch 2013). This blanket was based on the historic "Ravenstail Blanket," which originated from the Lynn Canal area, and was recreated as a project because of the desire of local weavers to restore the art of weaving "Chilkat Blankets." Wildlife: Yes Mountain goats in this area are more than locally significant since research suggests they are part of refugial populations surviving through the last glaciation (Shafer et al., 2010). High genetic differentiation between these four geographic regions suggests that mountain goats of the area are close to the source of recolonization from a Pleistocene glacial refugia. Additionally, these four mountain goat populations have not been previously impacted by permitted aviation activities such as heli-skiing, flight seeing tours and glacier landings.

ACEC Evaluation Table	Upper Chilkat River Traditional Use Area (See previous eval)
Important Value: Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	**Does the nominated ACEC contain the described important value?** Wildlife: Yes The area meets the importance criteria because it provides habitat for mountain goat populations which may be sensitive, unique and/or vulnerable to adverse change. Among North American large mammal species, mountain goats are particularly sensitive to human disturbance (Côté, 1996) and exhibit heightened sensitivity to aerial disturbance such as helicopters and fixed-wing aircraft (Foster and Rahs, 1983; Côté, 1996; Goldstein et al., 2005; Cadsand, 2012; Côté et al., 2013; White and Gregovich, 2018). The proposed area has not previously permitted aviation activities; therefore, mountain goats and their habitat within the area have not been predisposed to impacts associated with such activities. For this reason, the proposed area is unique from that of the greater planning area where permitted helicopter and/or fixed-wing activities have and continue to occur. Research within the last decade has shown mountain goats in Haines/Skagway area to be genetically unique and harbor the descendants of a refugial population that survived the last glaciation in southeast Alaska (Shafer et al. 2011). Furthermore, genetic analyses reveal genetic subdivisions among the various geographic regions suggesting genetic diversity is high. Additionally, cold adapted alpine species, such as mountain goat, are especially vulnerable to changing climates. Sustaining genetic diversity is vital for a species ability to cope with future environmental change.
Important Value: Has been recognized as warranting protection	**Does the nominated ACEC contain the described important value?** Cultural: No The area has not been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA. Wildlife: No The area has not been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
Important Value: Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	**Does the nominated ACEC contain the described important value?** N/A

ACEC Evaluation Table	Upper Chilkat River Traditional Use Area (See previous eval)
Important Value: Significant threat to human life/safety or property	**Does the nominated ACEC contain the described important value?** N/A
Summary of Important Values:	**Rational:** Wildlife: The proposed area is unique from that of the greater planning area where permitted helicopter and/or fixed-wing activities have and continue to occur. Research has shown genetic diversity of the area to be high. Additionally, the proposed area includes four different geographic regions with all three elevational mountain goat wintering strategies represented (i.e., low, medium, high). Sustaining genetic diversity and the habitat for such is vital for a species ability to cope with future environmental change. Cultural: The area has more than locally significant qualities because "Chilkat Blankets" made from mountain goat wool have importance beyond the local Chilkat tribe. It is an art form that is ceremonially important throughout the Tlingit, Haida and Tsimshian peoples of Southeast Alaska.
Carry forward for consideration?	Wildlife: Yes Cultural: Yes

ACEC Evaluation Table	Dyea uplands at Taiya River Mouth
General Location:	Approximately 2.5 miles northwest of Skagway, AK
General Description:	Undisturbed, timbered uplands above Taiya river
Acreage:	Size not specified by nominee. The area evaluated is the BLM administered lands in section 33 and 34 of T27S, R59E, Copper River Meridian, totaling approximately 160 acres.
Values Considered:	A comment was received requesting that the area be considered as an ACEC due to its historic archaeology related to the Chilkoot Trail.
Nominator:	NPS Klondike Gold Rush National Park
Relevant Value: 1. A significant historic, cultural, or scenic value	**Does the nominated ACEC contain the described relevant value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location. A literature review covering the area located no resources specifically within the nominated ACEC. Therefore, there is not enough information for cultural or historical resources in the nominated ACEC to meet relevance criteria.
Relevant Value: 2. A fish or wildlife resource	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 3. A natural process or system	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 4. Natural Hazards	**Does the nominated ACEC contain the described relevant value?** N/A
Important Value: More than locally significant	**Does the nominated ACEC contain the described important value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location.
Important Value: Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	**Does the nominated ACEC contain the described important value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location.
Important Value: Has been recognized as warranting protection	**Does the nominated ACEC contain the described important value?** Cultural: No There are no known archaeological sites or other cultural resources present within the nominated location.

ACEC Evaluation Table	Dyea uplands at Taiya River Mouth
Important Value: Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	**Does the nominated ACEC contain the described important value?** N/A
Important Value: Significant threat to human life/safety or property	**Does the nominated ACEC contain the described important value?** N/A
Summary of Important Values:	**Rational:** Cultural: A thorough audit of AHRS and BLM files revealed no known cultural resources within the nominated location. No additional information, maps, descriptive materials etc. were provided by the nominee to suggest the area meets importance.
Carry forward for consideration?	Cultural: No. Neither the relevance or importance criteria have been met.

ACEC Evaluation Table	Nourse Glacier/Moraine
General Location:	Approximately 19 miles northwest of Skagway, AK 59°43'23.79"N, 135°25'37.58"W
General Description:	Nourse Glacier, its glacial lake and moraine.
Acreage:	Size not specified by nominee. The area evaluated is that of the Nourse Glacier, its glacial lake and the Nourse moraine.
Values Considered:	A comment was received suggesting there is a high likelihood of Gold Rush era use of the Nourse Glacier area and it was requested an ACEC designation be considered to protect potentially important historic values of national significance. Additionally, it was requested that BLM consider an ACEC for the Nourse Glacier area to protect life and safety from natural hazards. The comment references Denton et al. (2009), suggesting potential exists for a glacial lake outburst flood from a morainal dam of Nourse Glacier Lake.
Nominator:	NPS Klondike Gold Rush National Park
Relevant Value: 1. A significant historic, cultural, or scenic value	**Does the nominated ACEC contain the described relevant value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location. A literature review covering the area located no resources specifically mentioned within the nominated ACEC. Therefore, there is not enough information for cultural or historical resources in the nominated ACEC to meet relevance criteria.
Relevant Value: 2. A fish or wildlife resource	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 3. A natural process or system	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 4. Natural Hazards	**Does the nominated ACEC contain the described relevant value?** Yes. Nourse Glacier/Moraine meets the relevance criteria as a natural hazard and potential source of a glacial lake outburst flood.

ACEC Evaluation Table	Nourse Glacier/Moraine
Important Value: More than locally significant	**Does the nominated ACEC contain the described important value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location. Therefore, there is not enough information for cultural or historical resources in the nominated ACEC to meet relevance criteria. Natural Hazard: No The BLM, with assistance from the USGS and the NPS, conducted a static stability assessment of the Nourse Moraine to determine its stability, and concluded that the moraine is stable (Denton, Lewis & Fisk, 2009). Based on these findings, the area is not more than locally significant.
Important Value: Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	**Does the nominated ACEC contain the described important value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location. Therefore, there is not enough information for cultural or historical resources in the nominated ACEC to meet relevance criteria. Natural Hazard: No The BLM, with assistance from the USGS and the NPS, conducted a static stability assessment of the Nourse Moraine to determine its stability, and concluded that the moraine is stable (Denton, Lewis & Fisk, 2009). Based on these findings, the area is not fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change
Important Value: Has been recognized as warranting protection	**Does the nominated ACEC contain the described important value?** Cultural: No There are no documented archaeological sites or other cultural resources present within the nominated location. Therefore, there is not enough information for cultural or historical resources in the nominated ACEC to meet relevance criteria. Natural Hazard: No The BLM, with assistance from the USGS and the NPS, conducted a static stability assessment of the Nourse Moraine to determine its stability, and concluded that the moraine is stable (Denton, Lewis & Fisk, 2009). Based on these findings, the area is not recognized as warranting protection.
Important Value: Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	**Does the nominated ACEC contain the described important value?** Cultural: N/A Natural Hazard: No The BLM, with assistance from the USGS and the NPS, conducted a static stability assessment of the Nourse Moraine to determine its stability, and concluded that the moraine is stable (Denton, Lewis & Fisk, 2009). Based on these findings, the area does not have qualities which warrant highlighting to satisfy management concerns about safety and public welfare.

ACEC Evaluation Table	Nourse Glacier/Moraine
Important Value: Significant threat to human life/safety or property	**Does the nominated ACEC contain the described important value?** Cultural: N/A Natural Hazard: No The BLM, with assistance from the USGS and the NPS, conducted a static stability assessment of the Nourse Moraine to determine its stability, and concluded that the moraine is stable (Denton, Lewis & Fisk, 2009). Based on these findings, and the unlikely event of moraine failure, it does not present an immediate and/or significant threat to human life/safety or property.
Summary of Important Values:	**Rational:** Cultural: A thorough audit of AHRS and BLM files revealed no known cultural resources within the nominated location. Additionally, no information, maps, descriptive materials etc. were provided by the nominee to suggest the area meets importance. Natural Hazard: Assessment of the Nourse Glacier/Moraine by Denton, Lewis & Fisk (2009) determined the moraine to be stable, based on the performance of a static stability assessment. Additionally, preliminary findings of each of the geophysical surveys suggest there is no ice-core within the Nourse Moraine. Other possible failure modes noted are: 1) earthquake induced liquefaction; 2) overtopping erosion caused by a large hydrologic event; 3) embankment failure by static stability or 4) internal erosion (from piping) However, these failure modes are not likely because: 1) Earthquake induced liquefaction is not likely due to lack of fines (no reports of cloudy seepage emanating from the embankment). Since no massive sand deposits are indicated in the resistivity survey, liquefaction would be an unlikely failure mode. 2) Overtopping erosion caused by a large hydrologic event is a remote possibility because the moraine is a naturally armored embankment with no adjacent glacier faces (i.e., for calving) and the only flow is provided by a slowly receding glacier. 3) Embankment failure by static stability is not likely because of a nearly flat surface slope on the moraine and the moraine is a naturally armored embankment due to poorly sorted moraine materials with a high angle of internal friction. 4) Internal erosion (from piping) is not likely as the embankment does not contain fines. Existing voids in the moraine allow significant quantities of seepage to proceed through the embankment reducing pressures that otherwise develop. As a result of the 2009 findings, and the unlikelihood of failure, none of the 5 importance criteria have been met.

ACEC Evaluation Table	Mt. Harding
General Location:	Approximately 5 miles southwest of Skagway, AK
General Description:	Undisturbed, steep mountain peak with snow covering it year round.
Acreage:	Size not specified by nominee.
Values Considered:	A comment was received requesting that the area be considered as an ACEC to protect its scenic value to the over one million visitors who visit Skagway each year.
Nominator:	NPS Klondike Gold Rush National Park
Relevant Value: 1. A significant historic, cultural, or scenic value	**Does the nominated ACEC contain the described relevant value?** Scenic Value: Yes The Mt. Harding area is the primary scenic viewshed from downtown Skagway and is seen by an estimated one million visitors each year.
Relevant Value: 2. A fish or wildlife resource	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 3. A natural process or system	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 4. Natural Hazards	**Does the nominated ACEC contain the described relevant value?** N/A
Important Value: More than locally significant	**Does the nominated ACEC contain the described important value?** Scenic Value: No. Mt. Harding is not more than locally significant. The Mt. Harding viewshed is primarily important to residents and visitors to the town of Skagway. It is similar to other mountains throughout Southeast Alaska and the Alaska Inside Passage, which is travelled by millions of cruise ship passengers each year.
Important Value: Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	**Does the nominated ACEC contain the described important value?** Scenic Value: No Mt. Harding as a viewshed is typical of mountains throughout Southeast Alaska and is not endangered, threatened or vulnerable to adverse change. The BLM's Ring of Fire Plan designated Mt. Harding and the entire planning area as Visual Resource Management (VRM) Class IV. VRM Class IV objectives allow for major modifications of the existing character of the landscape.
Important Value: Has been recognized as warranting protection	**Does the nominated ACEC contain the described important value?** Scenic Value: No Mt. Harding has not been recognized as warranting protection .
Important Value: Has qualities which	**Does the nominated ACEC contain the described important value?**

ACEC Evaluation Table	Mt. Harding
warrant highlighting to satisfy management concerns about safety and public welfare	Scenic Value: No There are no documented concerns about safety and public welfare regarding Mt. Harding.
Important Value: Significant threat to human life/safety or property	**Does the nominated ACEC contain the described important value?** Scenic Value: No There are no documented threats to human life/safety or property related to Mt. Harding
Summary of Important Values:	**Rational:** Scenic Value: Mt. Harding is not more than locally significant. The Mt. Harding viewshed is primarily important to residents and visitors to the town of Skagway. Mt. Harding as a viewshed is typical of mountains throughout Southeast Alaska and is not endangered, threatened or vulnerable to adverse change. The BLM's Ring of Fire Plan designated MT. Harding and the entire planning area as Visual Resource Management (VRM) Class IV. VRM Class IV objectives allow for major modifications of the existing character of the landscape.
Carry forward for consideration?	Scenic Value: No. The Mt. Harding area does not meet the importance criteria.

ACEC Evaluation Table	Haines Planning Area
General Location:	Includes the BLM managed South Block and the BLM managed North Block.
General Description:	Steep, rocky mountains, glaciers and narrow river valleys.
Acreage:	Approximately 326,000 acres
Values Considered:	Several comments were received, during the 2009 scoping, 2012 draft release, and the 2018 supplemental draft release, requesting or supporting that all, or portions within the planning area be considered as an ACEC to protect its scenic and wildlife values.
Nominators:	NPS Klondike Gold Rush National Park, Glacier Bay National Park, Peter Goll, Lauri Dadourian
Relevant Value: 1. A significant historic, cultural, or scenic value	**Does the nominated ACEC contain the described relevant value?** Scenic Value: Yes The BLM managed South Block and North Block are two scenic viewsheds from both cruise ships visiting Glacier Bay and from downtown Skagway and are seen by millions of visitors each year.
Relevant Value: 2. A fish or wildlife resource	**Does the nominated ACEC contain the described relevant value?** Wildlife: Yes The proposed area meets the relevance criteria as it contains mountain goat habitat essential to the maintenance of mountain goat diversity. Extensive research has been conducted on both mountain goat habitat requirements and genetic differentiation within the Haines Planning area.
Relevant Value: 3. A natural process or system	**Does the nominated ACEC contain the described relevant value?** N/A
Relevant Value: 4. Natural Hazards	**Does the nominated ACEC contain the described relevant value?** N/A

ACEC Evaluation Table	Haines Planning Area
Important Value: More than locally significant	**Does the nominated ACEC contain the described important value?** Scenic Value: No. These viewsheds are not more than locally significant. A portion of the North Block viewshed is primarily important to residents and visitors to the town of Skagway. The South Block's viewshed is on the north side of the mountains around Glacier Bay and is not visible to most visitors in Glacier Bay National Park. These mountain view sheds are similar to other mountains throughout Southeast Alaska and the Alaska Inside Passage, which is travelled by millions of cruise ship passengers each year. Wildlife: No The entire Haines Planning area is not more than locally significant as mountain goats and their habitat, experiencing various levels of impact, are widespread throughout the Rocky Mountain and coastal ranges of northwestern North America, including that of southeastern Alaska. Throughout much of the area, permitted aviation supported activities such as heli skiing, glacier landing and sight- seeing are currently occurring or have been permitted in the recent past.
Important Value: Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	**Does the nominated ACEC contain the described important value?** Scenic Value: No. These viewsheds are typical of mountains throughout Southeast Alaska and are not endangered, threatened or vulnerable to adverse change. The BLM's Ring of Fire Plan designated the entire planning area as Visual Resource Management (VRM) Class IV. VRM Class IV objectives allow for major modifications of the existing character of the landscape. Wildlife: No Although portions of the area contain mountain goats and their habitat, previous and current permitted activities have predisposed most of these areas to impacts, some of which have not yet been ascertained. While a portion of the planning area has been largely sheltered from impacts and may be appropriate to meet this criteria, the entire area as a whole is not because it has been impacted by permitted aviation supported activities such as heli skiing, glacier landing and sight- seeing since as early as 1993.
Important Value: Has been recognized as warranting protection	**Does the nominated ACEC contain the described important value?** Scenic Value: No These viewsheds have not been recognized as warranting protection. Wildlife: No The area has not been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.

ACEC Evaluation Table	Haines Planning Area
Important Value: Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	**Does the nominated ACEC contain the described important value?** N/A
Important Value: Significant threat to human life/safety or property	**Does the nominated ACEC contain the described important value?** N/A
Summary of Important Values:	**Rational:** Scenic Value: No The BLM managed North and South Block viewsheds are not more than locally significant. Portions of the North Block viewshed are primarily important to residents and visitors to the town of Skagway. The South Block's viewshed is on the north side of the mountains around Glacier Bay and are not visible to most visitors in Glacier Bay National Park. The BLM's Ring of Fire Plan designated the entire planning area as Visual Resource Management (VRM) Class IV. VRM Class IV objectives allow for major modifications of the existing character of the landscape. Wildlife: No The habitat is not more than locally significant as mountain goat habitat is widespread, including that of southeastern Alaska. Previous and currently permitted activities preclude most of the area from meeting important values such as rare, irreplaceable or unique. Nothing in the area has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
Carry forward for consideration?	Scenic Value: No. The BLM managed North and South Block viewsheds do not meet the importance criteria. Wildlife: No. Although mountain goat habitat essential to the maintenance of mountain goat diversity meets the relevance criteria, most of the areas within the nomination do not meet the importance criteria. The exception being the area previously evaluated in the Upper Chilkat River Traditional Use Area.

APPENDIX D: Ring of Fire Resource Management Plan, Haines Block Adaptive Management Strategy

Adaptive Management Strategy
Soft triggers represent a threshold indicating management changes are needed at the project/implementation level to address resource concerns before they become severe. Hard triggers represent a threshold indicating that more immediate and refined actions are necessary to stop a severe deviation from goals established within the Adaptive Management Strategy. The management responses to be applied if a trigger is met may include new or additional terms, conditions, stipulations, design features, BMPs or specific mitigation measures to permitted activities. Specific measures may include, but are not limited to: redistribution of permitted use (temporal and/or spatial), restrictions in duration and/or frequency, reduction in permitted landing allocations.

Population Estimates
Utilizing mountain goat population estimates as an indicator, a soft or hard trigger would be met within a geographic region when the following occurs:

Soft Trigger:

- 3 consecutive surveys of 10 percent or greater annual decline in total population OR
- 5 consecutive surveys of decline in total population OR
- 30 percent decline in total population from previous survey

Hard Trigger:

- 3 consecutive surveys of 20 percent or greater annual decline in total population OR
- 60 percent decline in total population from previous survey.

Kid:Adult ratios
Utilizing mountain goat Kid:Adult ratios as an indicator, a soft or hard trigger would be met within a geographic region when the following occurs:

Soft Trigger:

- 3 consecutive surveys of ≤20 kids:100 adults OR
- 5 consecutive surveys of decline below ≤25 kids:100 adults OR
- 10 kids:100 adults surveyed

Hard Trigger:

- 2 consecutive surveys of ≤5 kids:100 adults OR
- 0 kids:100 adults surveyed

APPENDIX E: Ring of Fire Resource Management Plan, Haines Block Air Quality Analysis Tables

Helicopter

Emission Factors (lb/min)[1]

Mode	CO	VOC	NO2	SO2	PM[2]10	PM2.5	CO2
Taxi Out	0.007	0.069	0.007	0.004	0.01	0.009	10.838
Takeoff	0.228	0.001	0.228	0.04	0.054	0.0486	98.788
Climb out	0.227	0.001	0.227	0.04	0.045	0.0405	97.732
Approach	0.032	0.001	0.032	0.01	0.018	0.0162	23.855
Taxi In	0.007	0.069	0.007	0.004	0.01	0.009	10.838

[1] BLM Air Resources Toolkit - Technical Support Document. Section 4.14

[2] Note - PM estimates were assumed to be entirely PM_{10}. PM_{10} emissions were assumed to be comprised of 90 percent $PM_{2.5}$.

Emissions (pounds/mode) - 1 Trip

Mode	CO	VOC	NO_2	SO_2	PM[1]10	$PM_{2.5}$	CO_2
Taxi Out	0.014	0.138	0.014	0.008	0.020	0.018	21.68
Takeoff	0.228	0.001	0.228	0.040	0.054	0.049	98.79
Climb out	0.454	0.002	0.454	0.080	0.090	0.081	195.46
Approach	0.640	0.020	0.640	0.200	0.360	0.324	477.10
Taxi In	0.007	0.069	0.007	0.004	0.010	0.009	10.84

Input Values[1]

Names	Fuel Flow	Time in Mode
	(kg/sec)	(min)
Taxi Out	0.013	**2**
Takeoff	0.119	**1**
Climb out	0.117	**2**
Approach	0.029	**20**
Taxi In	0.013	**1**

[1] BLM Air Resources Toolkit - Technical Support Document. Section 4.14

Emissions (pounds/mode) 6000 Trips

Mode	CO	VOC	NO_2	SO_2	PM[1]10	$PM_{2.5}$	CO_2
Taxi Out	84.00	828.00	84.00	48.00	120.00	108.00	130,056.00
Takeoff	1,368.00	6.00	1,368.00	240.00	324.00	291.60	592,728.00
Climb out	2,724.00	12.00	2,724.00	480.00	540.00	486.00	1,172,784.00
Approach	3,840.00	120.00	3,840.00	1,200.00	2,160.00	1,944.00	2,862,600.00
Taxi In	42.00	414.00	42.00	24.00	60.00	54.00	65,028.00
TOTAL (Pounds)	**8,058.00**	**1,380.00**	**8,058.00**	**1,992.00**	**3,204.00**	**2,883.60**	**4,823,196.00**

Emissions (tons/mode) 6000 Trips

Mode	CO	VOC	NO_2	SO_2	PM^1_{10}	$PM_{2.5}$	CO_2
Taxi Out	0.04	0.41	0.04	0.02	0.06	0.05	65.03
Takeoff	0.68	0.00	0.68	0.12	0.16	0.15	296.36
Climb out	1.36	0.01	1.36	0.24	0.27	0.24	586.39
Approach	1.92	0.06	1.92	0.60	1.08	0.97	1,431.30
Taxi In	0.02	0.21	0.02	0.01	0.03	0.03	32.51
TOTAL (Tons)	**4.03**	**0.69**	**4.03**	**1.00**	**1.60**	**1.44**	**2,411.60**

Fixed Wing

Emissions for Take off and Landing (LTO) Emissions Factors[1] (pounds per LTO)

Mode	CO	SO_2	NO_2	PM_{10}	$PM_{2.5}$	VOC	CO_2 [3,4]
LTO[2]	12.00	0.01	0.07	0.24	0.16	0.15	163.14

CO - Carbon Monoxide SO_2 - Sulfur Dioxide NO_2 - Nitrogen Dioxide
PM_{10} - Particulate Matter less than 10 microns in diameter
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in diameter
VOC - Volatile Organic Compounds
CO_2 - Carbon Dioxide

1 – Development Of Statewide Annual Emissions Inventory And Activity Data For Airports. Appendix E 2- Landing and Take Off
3 - Queen's University spreadsheet (http://post.queensu.ca/~groganp/CO2%20emissions%20calculator%20for%20travel%20including%20small%20fixed-wing%20and%20helicopter%20aircraft%20-%20generic.xls)
4 - AIRCRAFT PISTON ENGINE EMISSIONS - SUMMARY REPORT (http://www.hjelmco.com/upl/files/2425.pdf)

Number of LTOs: 20

Totals	CO	SO_2	NO_2	PM_{10}	$PM_{2.5}$	VOC	CO_2[2]
Total Emissions (lbs)	240.0	0.2	s1.3	4.8	3.2	3.0	3262.8
Total Emissions (tons)	0.120	0.00010	0.00065	0.002	0.0016	0.0015	1.631
Total per Trip	0.552	0.005	0.022	0.045	0.030	0.006	6.318

Emissions for Cruising (Round trip to and from site)

User Inputs	Hours	Minutes
Cruise Time Out	0.42	25.0
Cruise Time In	0.42	25.0

Total Emissions per Round trip (cruise mode); Lbs/hr

Mode	CO[4]	SO_2 [3,4]	NO_2 [4,5]	PM_{10}[6]	$PM_{2.5}$[6]	VOC[4]	CO_2[1]
Cruise	51.79	0.55	2.53	5.09	3.39	0.59	562.4

1 - Queen's University spreadsheet (http://post.queensu.ca/~groganp/CO2%20emissions%20calculator%20for%20travel%20incl uding%20small%20fixed-wing%20and%20helicopter%20aircraft%20-%20generic.xls)
2 - All sulfur emitted assumed to be SO_2
3 - Fuel sulfur content assumed 3 grams/kg fuel. Taken from - Aircraft Engine Exhaust Emissions And Other Airport-Related Contributions To Ambient Air Pollution: A Review Masiol, Mauro; Harrison, Roy M. In: Atmospheric Environment, Vol. 95, 01.01.2014, p. 409-455.
4 - Aircraft Piston Engine Emissions - Summary Report (http://www.hjelmco.com/upl/fil es/2425.pdf) 5 - All NOX emitted assumed to be NO^2
6 - Ratio of Cruise to LTO emissions to determine cruise PM emissions

Ratios for estimating PM cruising emissions

Ratios of Cruise/LTO	CO	SO2	NO2	VOC	CO2	Average of Ratios
Emissions	4.32	55.32	38.97	3.94	3.45	21.20

Number of trips: 20

Totals	CO	SO_2	NO_2	PM_{10}	$PM_{2.5}$	VOC	CO_2[2]
Total Emissions (lbs)	863.1	9.2	42.2	84.8	56.5	9.8	9372.7
Total Emissions (tons)	0.432	0.005	0.021	0.042	0.028	0.005	4.686

Calculations developed in excel spreadsheets can be obtained by contacting the Anchorage District Office.