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

Final Environmental Impact Statement for the Proposed Haines Amendment to the Ring of Fire Resource Management Plan

October 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 EIS:
$469,740

The Bureau of Land Management Today

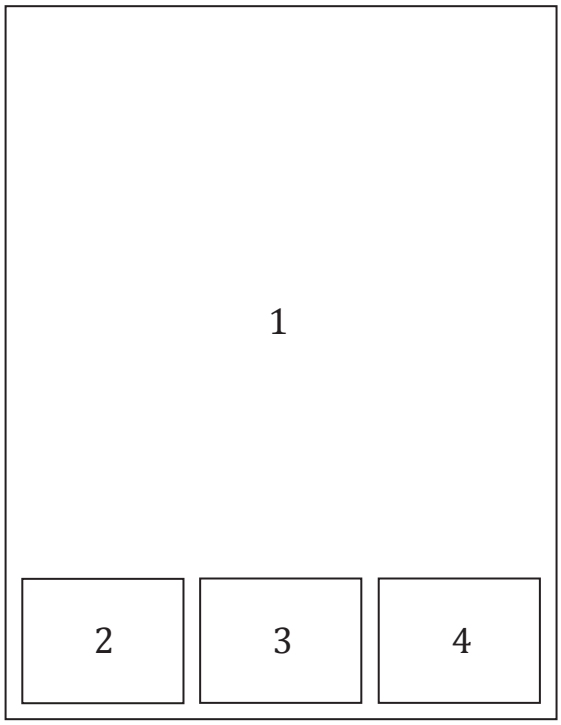
Our Vision

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

Our Mission

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

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-20/001+1610+A020

Responsible Agency: United States Department of the Interior, Bureau of Land Management

Document Status: Draft ( ) Final (X)

Abstract: This Final Environmental Impact Statement (EIS) for the Proposed Haines Amendment to the Ring of Fire Resource Management Plan (RMP) has been prepared by the United States Department of the Interior, Bureau of Land Management (BLM) Glennallen Field Office. The planning area is located in southeast Alaska Boroughs of Haines and Skagway. The planning area covers about 920,000 acres which includes 317,096 acres of public lands managed by the Glennallen Field Office. This RMP amends the Ring of Fire Resource Management Plan approved in 2008.

The purpose of this RMP amendment is to make decisions that guide future land management actions and site-specific implementation decisions in the Haines Block. The decisions will address goals and objectives for resource management (desired outcomes) and establish land uses (allocations) that are allowable, restricted, or prohibited to achieve the goals and objectives. The need for this RMP amendment is to provide guidance that will address concerns for resource management (wildlife habitat) and recreation.

This Final EIS/Proposed RMP Amendment evaluated four alternatives for managing the planning area. Alternative A, the no action alternative, represents existing management described by the current land use plan and provides a benchmark against which to compare the other alternatives. Alternative E maintains recreational uses at current levels and identifies key areas for land use designations and management actions. Alternative F emphasizes recreational uses only and does not designate land use or management actions specific to those designations. Alternative G, which is the BLM's Proposed RMP Amendment preferred alternative, provides additional recreation opportunities and land use designations to protect resources and provide flexibility for future management actions at the project-specific implementation level. Adaptive management is proposed for all alternatives to provide for sustainability of resources and opportunities for recreation. Alternatives E, F, and G were developed using input from the public, stakeholders, and cooperating agencies. Major planning issues addressed include wildlife; recreation; and areas of critical environmental concern.

Protests: Protests on the Final (EIS)/Proposed RMP Amendment must be received within 30 days from publication of the United States Environmental Protection Agency's Notice of Availability in the Federal Register.

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Alaska State Office
222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7504
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October 2019

Dear Reader:

The Bureau of Land Management (BLM) has completed a Final Environmental Impact Statement (EIS) for the Ring of Fire Resource Management Plan (RMP) Haines Amendment. The Final EIS addresses potential impacts associated with the BLM's implementation of the RMP Amendment. The BLM prepared this document in consultation with cooperating agencies, and in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the BLM's NEPA Handbook (H-1790-1), the BLM Land Use Planning Handbook (H-1601-1), and other applicable laws and policies.

The Haines Planning Area consists of 920,000 acres of land which includes about 317,096 acres of public lands managed by the Glennallen Field Office. All lands are located in Haines and Skagway Boroughs. The decisions to be made as part of this Final EIS concern which land use designation is best suited to provide resource protection and maximize public access to these lands.

The alternatives discussed in the Final EIS include required operating procedures designed to mitigate impacts on resources and their uses. Future actions requiring BLM approval, including proposed helicopter-supported recreation, would require further NEPA analysis.

The analysis of the preferred alternative and other alternatives was conducted based on public input gathered from the 90-day public scoping period, public outreach and the 90-day public comment period of the Supplemental Draft EIS. On June 20, 2019, the BLM held a public meeting on the Supplemental Draft EIS in Haines, Alaska. The BLM received written comments by mail, email, and online comments through ePlanning. Modifications to the Supplemental Draft EIS were made based on public comments, cooperating agency coordination, tribal consultation, and the BLM's internal review of the Supplement Draft EIS.

Consistent with 43 CFR 1503.4, the BLM has responded to substantive comments provided during the public comment period and prepared this Final EIS/Proposed Resource Management Plan Amendment. The BLM has identified Alternative G as the preferred alternative. This alternative employs an adaptive management strategy that will allow for the continued study of wildlife impacts while providing for a means to increase commercial recreation activities.

The Proposed Resource Management Plan Amendment/Final EIS can be accessed on the internet at https://www.blm.gov/office/glennallen-field-office or you can make a request for a CD to Mr. Bruce Loranger, Planning and Environmental Coordinator, BLM Anchorage District Office, 4700 BLM Road, Anchorage, AK 99507. Persons who use a telecommunications device for the

deaf (TDD) may call the Federal Relay Service (FRS) at 1 (800) 877-8339 to contact Mr. Loranger during normal business hours. The FRS is available 24 hours a day, 7 days a week, to leave a message or question. You will receive a reply during normal business hours.

The Environmental Protection Agency's publication of the notice of receipt of the Final EIS/Proposed RMP Amendment in the Federal Register initiates a 30-day protest period for any person who participated in the planning process and has an interest which is or may be adversely affected by the approval of the proposed plan amendment.

The protest regulations at 43 CFR 1610.6-2 specify the required elements for filing a valid protest. As much as possible, cite specific planning documents or available planning records (e.g. meeting minutes or summaries, correspondence, etc.) in your protest.

All protests must be in writing and filed with the BLM Director, either as a hard copy or electronically via BLM's ePlanning website by the close of the protest period. The only electronic protests the BLM will accept are those filed through ePlanning. All protest letters sent to the BLM via fax or email will be considered invalid unless a properly filed protest is also submitted.

The ePlanning page for the Ring of Fire RMP Haines Amendment each planning project will contain a tool for submitting a valid protest electronically. The link to the respective ePlanning project page where a protest may be filed will be included in the Notice of Availability for the proposed RMP and final EIS, and in related news releases and Dear Reader letters.

Hard copy protests must be mailed to one of the following addresses, postmarked by the close of the protest period:

Regular Mail:
Director (210)
Attention: Protest Coordinator, WO-210
P.O. Box 71383
Washington, D.C. 20024-1383

Overnight Mail (non-USPS delivery service):
Director (210)
Attention: Protest Coordinator, WO-210
20 M St SE, Room 2134LM
Washington, D.C. 20003

A record of decision will be signed no sooner than 60-days after publication of the Notice of Availability in the Federal Register of the Final EIS.

Thank you for your continued interest in the Ring of Fire RMP Haines Amendment. We appreciate the information and suggestions you contributed to the planning process. For additional information or clarification regarding this document, please contact Mr. Bruce Loranger at (907) 267-1221.

Sincerely,

Chad B. Padgett
State Director

EXECUTIVE SUMMARY

Introduction

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

The Haines Planning Area encompasses approximately 920,000 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 317,096 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 Final 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 on 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 EIS.

This RMP Amendment amends the applicable portions of the Ring of Fire RMP and provides a plan which is consistent with evolving law, regulations, and policy. This RMP Amendment meets the requirements of FPLMA which states, "The Secretary shall, with public involvement….develop, maintain, and, when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands" (43 U.S.C. 1712).

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.
- Retain the Monitoring and Control Area (MCA) for wildlife studies.

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

- 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 permitted helicopter-supported recreation activities impact brown bear denning, wolverine and bald eagles?
- 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) represented the continuation of management practices at the 2009 level. Alternatives B, C, and D described proposed changes to management based on information available in 2012.

The May 2019 Supplemental Draft EIS contained 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 accounted for information obtained over the past 10 years and from comments provided by the public related to the previous draft. Because the 2017 Alaska Department of Fish and Game study provided new information that the first three action alternatives did not consider, the previous action alternatives analyzed in the Draft EIS were 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. 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.

Alternative E –
This alternative would establish a 102,257 acre 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 include all the Monitoring and Control Area (MCA) 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 remove the MCA designation 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 designation would be removed 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 at 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, or a maximum of 5,500 summer and 5,500 winter landings. Up to 5,500 winter landings could be achieved in year 1 and annually. In years 1 through 4, the BLM would permit up to 1,600 winter landings within buffered high use winter mountain goat habitat (see Map 9 in Section 7). In years 1 through 4, the BLM would permit up to 2,400 summer landings annually. In year five, summer landing allocations could increase (see Table 2.2). Winter permits issued within buffered high use winter mountain goat habitat, must achieve an average of 75 percent utilization of landings by combined operators to trigger a step increase of landings. For example, an average annual utilization of 1200 landings by combined operators in years 1 - 4, could trigger the need for a step increase within winter high -use mountain goat habitat. Increases would only be considered if goat monitoring indicates goat populations are healthy (see Table 2.2). Similarly, summer operators must achieve an average 75% utilization of summer landings by combined operators over 4 years to trigger a potential increase in permit allocations (see Table 2.2).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 102,257 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 and a study area. No SRP landings would be permitted.

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 4-year study period of time was the most appropriate based on mountain goat biology and logistical constraints associated with wildlife surveys. A 4-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 ROPs, adaptive management, as well as current terms and conditions applied to SRPs. In this alternative the MCA designation would be removed 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 closed 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 outreach was held, closing 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.

In May of 2019, the Supplemental Draft EIS for the Haines Amendment to the Ring of Fire Resource Management Plan was published for a 90 day public comment period. An open house was held in Haines on June 20, 2019. Additional consultation and cooperating agency meetings were held in Haines and Juneau at that time. Public involvement is further described in Chapter 5 of this Final 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 its report entitled *Mountain Goat Resource Selection in the Haines–Skagway Area: Implications for Helicopter Skiing Management* (White & Gregovich, 2018) which informed the Supplemental Draft EIS published in May of 2019.

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 Proposed RMP Amendment/Final 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 Final 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.-Canada 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. The Supplemental Draft EIS reevaluated 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, the Supplemental Draft EIS did 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 land.

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 public outreach 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 the MCA in the northwest part of the Planning area as an area meeting the criteria 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 criteria 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, some of which were updated since the publishing of the SDEIS as a result of comments and additional information.

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 an area meets 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 the Supplemental Draft EIS, the BLM conducted an intensive internal review to determine whether any portion of the Planning Area qualified as an ACEC. First, to ensure consistency in the 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 maximum range of annual helicopter landings as well as the impacts of permitted helicopter activities to the local communities, recreationists, and wildlife. The BLM retains complete discretion over whether to issue special recreation permits based on a number factors, including conformance with laws and land use plans, public safety, conflict with other uses, resource protection, public interest, and whether in the past permittees have complied with the terms of their permits. 43 CFR. 2932.26. In addition, BLM retains discretion regarding the allocation of landings to individual SRP permittees.

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,
- Retain the MCA for wildlife studies.

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

- 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 permitted helicopter-supported recreation activities impact brown bear, wolverine and bald eagles?
- 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?
- 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 from decisions 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 horizontal and vertical buffer stipulation for BLM permitted activities pertaining to flight paths around the Chilkoot Trail between May 1 and September 30.
- *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 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 are not suitable nesting habitat. 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 EIS. These criteria help tailor the 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 EIS. 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 Haines, Skagway, and Anchorage. In 2012 the Draft EIS was published and public comments were received during a 90-day public comment period. 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 for 60 days starting in April 2018..

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 on 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 between 2010 and 2014. 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 60-day public outreach 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 were held following publication of the Notice of Availability of this Supplemental Draft EIS in the *Federal Register*. In May of 2019 a 90-day public comment period was again held on the RMP Amendment/Supplemental Draft EIS. An open house was held in Haines in June of 2019, and meetings with cooperators, Tribes, and special interest groups were held at that time. Comments received and the agency responses are provided in Appendix A.

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.

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).

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 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 outreach 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 a 500-meter minimum vertical and 1500-meter horizontal distance from visible Dall Sheep and mountain goats1. Helicopters used in support of permitted recreation activities will not land or fly 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 November 15 and April 30 and will maintain a 500-meter minimum aboveground level (AGL) altitude above habitats mapped as high-use. Dall sheep and mountain goat high-use habitats are shown on Map 9, 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.

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 6 (see Chapter 7.0). Aircraft will maintain a 500-meters minimum vertical and 1500-meters horizontal distance from visible mountain goats and Dall sheep. Aircraft will not land within mapped high-use winter habitat, Map 9 (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: eagles, 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 (including dens, nests, haulouts) 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. 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.

5. 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).

6. 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. Such plans require, but are not limited to: reporting of landing locations, flight paths and wildlife observations (including dens, nests, haulouts), communications plans and procedures, emergency response procedures and accident reporting. The FAA may review these submissions.

7. 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.

8. 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.

9. 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)

In the event that annual surveys are not completed, thus resulting in data gaps for management indicators, predictive models may be utilized to help inform current conditions.

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, Haines Block ACEC-RNA (approximately 102,257 acres)

- The proposed ACEC is located in the Upper Chilkat and Chilkoot River drainages and includes geographic features such as Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, Mount Raymond and 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 to 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.
- Closed to fixed wing access.
- Closed to motorized or mechanized use.

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

- Remove the MCA designation.

Recreation Management Area Designation

- The North and South Blocks (excluding the ACEC-RNA) would be managed as an ERMA. The ERMA would consist of 214,839 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 317,096 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 designation would be removed. 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 summer and 3,000 winter, annually. 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 ADFG, manage for healthy and vibrant populations of mountain goats while sustaining a traditionally significant resource.
- Helicopter landings and UAS not permitted. There is a 14-consecutive day camping limit on SRMA lands year round. The area is classified as limited to existing routes. Additional routes could be considered and desinated. 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, 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, or a maximum of 5,500 summer and 5,500 winter landings.
- Up to 5,500 winter landings could be achieved in year 1 and annually.
- In years 1 through 4, the BLM would permit up to 1,600 winter landings within the buffered high use winter mountain goat habitat. In year 5, winter landing allocations within buffered high use winter mountain goat habitat could increase (see Table 2.2). Map 9 in Chapter 7 illustrates the 1,500 meter buffered, high-use winter mountain goat habitat. In years 1 through 4, BLM would permit up to 2,400 summer landings annually. In year five, summer landing allocations could increase (see Table 2.2). Winter permits issued within buffered high use winter mountain goat habitat must achieve an average of 75 percent utilization of landings by combined operators to trigger a step increase of landings. For example, an average annual utilization of 1,200 landings by combined operators in years 1- 4 could trigger the need for a step increase within winter high -use mountain goat habitat. Increases would only be considered if goat monitoring indicates goat populations are healthy (see Table 2.2). 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. Similarly, summer operators must achieve an average 75 percent utilization of summer landings by combined operators over 4 years to trigger a potential increase in permit allocations (see 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.

Table 2.2 Alternative G Incremental Increase in Landings

Year of Potential Increase[a]	Total Potential Permitted Winter Landings	Inside Buffered High Use Winter Habitat Maximum Winter Landings	Outside Buffered High Use Winter Habitat Number of Winter Landings	Summer Landings Maximum
1	5,500	1,600	3,900–5,500	2,400
5	5,500	3,600	1,900–5,500	4,400
9	5,500	5,500	5,500	5,500

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 (214,839 Acres). ERMA designation will not apply to the ACEC-RNA. • **ACEC-RNA:** Western portion of the North Block (102,257 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:** ○ Provide for diversity of recreation opportunities and quality commercial recreation use experience ○ Manage for undeveloped recreation tourism ○ Avoid adverse effects to wildlife ○ Minimize disturbance to adjacent communities • **SRMA MCA Objective:** ○ Provide an unimpacted, unfragmented area consistent for monitoring and control research and data analysis. ○ 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:** ○ No recreation management emphasis would be extended for these lands. ○ Lands would be managed under ROF ROD, FLPMA, BLM Regulations and Policies, and applicable ROPs, Stipulations, and Adaptive Management.	• **ERMA Objective:** ○ Provide for dispersed recreation opportunities commensurate with resource management and uses. ○ 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:** ○ **Relevance:** ▪ Goat habitat that is essential for maintaining mountain goat diversity ▪ Significant cultural resources important to maintaining Chilkat goat wool weaver traditions. ○ **Importance:** ▪ Fragile, irreplaceable, unique, unimpacted mountain goat populations/habitat. ▪ Continuation of distinctive Chilkat Traditional goat wool blanket weaving practices. • **ACEC Objective:** ○ 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. ○ 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:** ○ Same as Alternative E • **MCA Objective:** ○ Same as Alternative A ○ Retain MCA for 5 years, then lift • **No ACEC Designation**	• **ERMA Objective:** ○ Same as Alternative E • **SRMA Objective:** ○ 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:** ○ Limit to 2015-2019 permit levels: 2,700 maximum total landings. ○ Aircraft will not land within 0.5 mile of habitats mapped as high-use areas. ○ Helicopter use on and near the Nourse Glacier is restricted from May 1 to June 15. ○ Flight corridors will be designated for helicopter permitted landings. ○ Winter SRP activities are closed in areas mapped as high-use mountain goat habitat (see ROP 16). ○ Skiers will not use routes within 0.5 mile of known winter high use habitats. ○ **Winter:** 300 landings in the South Block through annual year permits using adaptive management. ○ **Summer:** 2,400 landings in the North Block • **Within SRMA MCA:** ○ Closed to helicopter-supported permitted landings or UAS use. ○ Closed to fixed wing access. • **Within Lands Not Designated as Recreation Management Area:** ○ Aircraft will not land within 0.5 mile of habitats mapped as high-use areas. ○ Winter SRP activities are closed in areas mapped as high-use mountain goat habitat. ○ Aircraft will not land within 0.5 mile of known kidding areas May 1 to June 15.	• **Within ERMA:** ○ Limit to 2015-2019 permit levels: 2,700 maximum total landings. ○ Fixed wing SRP landings would be permitted. ○ Fixed wing causal use landings allowed. ○ No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). ○ **Winter:** 300 combined total permits (South Block ERMA only) ○ **Summer:** 2,400 combined total permits (North Block ERMA only). • **Within ACEC-RNA:** ○ Closed to helicopter-supported permitted landings or UAS use. ○ Closed to fixed wing access. ○ Closed to other motorized or mechanized use.	• **Within ERMA:** ○ Expand current permit levels: 6,000 maximum total landings (outside of the MCA for the first 5 years, includes MCA after 5 years) ○ Fixed wing SRP landings would be permitted. ○ Fixed wing causal use landings allowed. ○ No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). ○ **Winter:** Permit up to 3,000 landings. ○ **Summer:** Permit up to 3,000 landings. • **Within MCA:** ○ Closed to helicopter-supported recreation permits, landings or UAS use within MCA for first 5 years. ○ Closed to fixed wing SRP access for 5 years. ○ Fixed wing causal use access allowed.	**Within ERMA:** ○ Expand current permit levels: 11,000 maximum total landings through adaptive management process. ○ Fixed wing SRP landings would be permitted. ○ Fixed wing casual use landings allowed. ○ No helicopter-supported recreation winter landings are allowed within high-use winter goat habitat; summer landings must avoid kidding areas (see ROP 16). ○ Permit utilization of 75 percent over four-years, triggers permitting allocation increase, if monitoring indicates healthy goat populations and desired trends (see Table 2.2). ○ 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:* • Outside buffered habitat up to 5,500 landings. • Within buffered habitat allocate a maximum of 1600 winter landings. ○ **Summer:** Permit up to 5,500 landings. *Year 1:* • 2400 summer landings. • **Within SRMA:** ○ No helicopter-supported recreation landings or UAS use allowed. ○ Fixed wing casual use access allowed. ○ Fixed wing SRPs to include transporters consistent with SRMA objectives would be considered. ○ 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:** ○ 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:** ○ No designations made in this RMP. • **Land Use within SRMA:** ○ ROW consistent with SRMA objectives considered. ○ Land acquisitions within SRMA considered. • **Land Use within SRMA MCA:** ○ ROW avoidance area. ○ Surface use or occupancy would be avoided in high use winter mountain goat habitat. ○ Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use within Lands Not Designated for RMA:** ○ All land uses permitted in ROF ROD Land Use. Management Decisions and ROPs, Stipulations, and Terms would be considered. • **Administration:** ○ 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:** ○ Within ACEC-RNA: Recreational use limited to existing riverine routes, no additional routes considered. ○ Within ERMA: Limited to existing roads and trails to be consistent with State of Alaska's Generally Allowed Uses. • **VRM:** IV • **Minerals:** ○ No designations made in this RMP. • **Land Use within ACEC RNA:** ○ ROW exclusion area. ○ 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. ○ Closed to surface use or occupancy in high use winter mountain goat habitat ○ Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use within ERMA:** ○ ROWs considered ○ Land uses permitted under the ROF plan, such as mining access, would continue. • **Administration:** ○ Same as Alternative A	• **OHV:** ○ **Within MCA for 5 years:** Recreational use limited to existing riverine routes. ○ **Within ERMA:** Same as Alternative E • **VRM: IV** • **Minerals:** ○ No designations made in this RMP. • **Land Use within MCA (for 5 years):** ○ ROW avoidance area. ○ Surface use or occupancy would be avoided in high use winter mountain goat habitat ○ Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use Within ERMA** Same as Alternative E • **Administration:** ○ Same as Alternative A	• **OHV:** ○ **Within SRMA:** Recreational use limited to existing routes. Additional routes could be designated. ○ **Within ERMA:** Same as Alternative E. • **VRM:** IV • **Minerals:** ○ No designations made in this RMP. • **Land Use Within the SRMA:** ○ ROW consistent with SRMA objectives considered. ○ Surface use or occupancy would be avoided in high use winter mountain goat habitat ○ Land uses permitted under the ROF plan, such as mining access, would continue. • **Land Use Within the ERMA:** ○ Same as Alternative E • **Administration:** ○ 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 (Preferred)
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 (214,839 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 alternative; 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 had 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. The 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. 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. 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 a 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.

This EIS presents a 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, an 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 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 3.5 to 4.5 years of age, with the highest percentage of females first producing around 5.5 years of age (Bailey 1991, Côté and Festa-Bianchet 2003, Larsen, 2019). Within the Planning Area, it is quite evenly divided among 4 and 5 year old females when their first young is produced (K. White, personal communications, 04/11/2019). 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. RSF models are predictive in nature and are utilized to identify the probability of use for an identified resource unit (Boyce et al. 2002). For purposes of the RSF 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. Habitat identified with a higher probability of use is depicted in Map 9 as high-use habitat.

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 four geographic regions of Alaska (Goldstein & et al., 2005). Some of these measures have been modified and adopted on the Tongass National Forest for helicopter recreation activities. Goldstein & et al., (2005) concluded that for the Chilkat Mountain Range of southeast Alaska, mountain goat groups had a 38% probability of becoming disturbed by helicopters at 500-meters. 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). This requirement, in part, is a reflection of Stockwell, Bateman and Berger (1991) suggesting impacts to bighorns would be minimized if helicopters were to fly no nearer to bighorn habitat than 500-meters. 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).

[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.

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-eight transects/transect segment strips were to be flown every mid-June-early July 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). In 2018, BLM entered into a data sharing agreement with Green Mountain College in an effort to compile and analyze mountain goat data collected by BLM between 1995 and 2005. Through combined geospatial analysis, Denton's (2006) assertion that concentrations of goats where evident at these locations was confirmed (Larsen, 2019). These areas of high geospatial densities included adults, yearlings and kids when surveyed.

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 MCA 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.

Denton (2006) identified concentrations of mountain goats adjacent to BLM managed lands near Davidson Glacier, and through public involvement, an additional area was precluded from helicopter landings in 2002.

Climate Change
Climate change has been affecting regions of Alaska more than any other part of the U.S., including the most rapid temperature increases and a warming rate twice that of the rest of the U.S. over the past 50 years (Haufler et al. 2010, Reidmiller et al. 2018). Longer snow-free periods, changing precipitation patterns, and an increase in rain-on-snow events may impact wildlife in the planning area through changes in vegetation communities, species ranges, and species composition.

Specific to mountain goats, data collected throughout coastal Alaska over the last four decades indicates survival is highest during low snowfall winters and cool summers (White et al., 2018). General circulation models (GCM) for the region predict increased summer temperatures with reduced winter snowfall in future years. White et al. (2018) developed age-structured population models utilizing 10 different GCM scenarios for coastal Alaska in which 5 of 10 models suggested the net effect of climate change will lead to extinction of mountain goats by 2085. The benefits resulting from reduced winter snow-fall did not outweigh the projected increases in summer temperatures.

Brown Bear
Since the release of the 2012 DEIS, ADFG conducted brown bear denning surveys within portions of the planning area, which has provided additional brown bear habitat information. Over the course of three years and beginning in 2015, fixed-wing surveys were conducted to physically observe den sites of which 90 were identified within the Haines area. Habitat characteristics recorded at each location included, but were not limited to, elevation, slope, topographic position and solar radiation (Crupi, 2017). Identified characteristics were used to create a predictive RSF model, identifying areas with a high probability of use by denning brown bears (See Map 8, Mountain Goat and Brown Bear Winter Habitat). In 2018, ADFG research began in the Haines area in an effort to estimate abundance, obtain population demographic information, and determine habitat preferences for brown bears in GMU 1D.

Bald Eagle
Bald eagles (*Haliaeetus leucocephalus*) are common and occur year-round in the Planning Area and are found throughout southeastern Alaska (Buehler 2000). In fall, immature and adult bald eagles congregate on the Chilkat River where spawning salmon provide a food source for large numbers of eagles.

The Alaska Chilkat Bald Eagle Preserve also lies along the Chilkat River within the Planning Area boundaries. The Preserve, created by the State of Alaska in June of 1982, was established to protect and perpetuate the large concentration of bald eagles and their 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 State-managed Preserve consists of 48,000 acres of river bottom land of the Chilkat, Kleheni, and Tsirku Rivers (ADNR, 2008). The river "flats" of the Chilkat River along the Haines Highway between miles 18 and 24 are the main viewing area for eagle watchers and considered “critical habitat” in the preserve by ADFG. Bald eagles are attracted to the area by the availability of large quantities of spawned-out salmon and open waters in late fall and winter. This portion of the Chilkat River naturally remains open in these winter months due to its hydrology and suspended sediments, and the spawned-out salmon carcasses attract a large concentration of bald eagles in late fall. Over 3,000 bald eagles were counted within the Preserve during the Fall Congregation from October 2007 to February 2008 (ADNR, 2008). A resident population of 200 to 400 bald eagles inhabits the Chilkat Valley, with more than 80 eagle nests observed within the Preserve. The total number of bald eagles within the Planning Area is unknown.

Current Bald Eagle Management
Eagle nesting habitat is primarily old-growth trees along the coast and within riparian areas. Following USFWS standards and guidelines for regulating human disturbance of bald eagles in Alaska, all identified eagle nests are surrounded by a 330-foot radius protective habitat management zone (USFWS, 2007a). Repeated aircraft flights are restricted within ¼ mile of nest trees when active. All nest trees are considered active March 1 to May 31

and those nest trees containing eggs or young are considered active June 1 to August 31 annually (USFWS, 2007a). All permitted activities in the Planning Area would include stipulations to follow these guidelines. USFWS surveys have located approximately 150 eagle nests within the Planning Area across land ownerships (USFWS, 2007).

Wolverine
Wolverines are found across Alaska and the planning area, and are a wide-ranging species that naturally occur only at low densities with large home ranges (ADF&G 2008). There is limited information on the wolverine population in the planning area, and population trends are estimated by annual harvest reports and mandatory sealing requirements from trappers (Sell 2013). Relative abundance and population trend information from trapper harvest data in region I (GMU's 1-5) indicate wolverines are scarce in the region (Spivey 2019).

Wolverines will probably always be found at low densities in the planning area, but because of extensive suitable habitat that is difficult to access, the wolverine population is likely to remain stable. With the exception of harvest data, limited information is known about wolverines in Unit 1D. A wolverine research project was conducted by ADF&G adjacent to the planning area in the Berners Bay portion of Unit 1C during 2007–2011 (Lewis et al. 2012). Because of its proximity to Unit 1D and the planning area, results of the 1C study are likely applicable to Unit 1D wolverines. Wolverines were found to use low to mid elevation areas with moderate slopes, with diets consisted of ungulate carrion (mountain goats and moose) and birds (grouse and ptarmigan) (Lewis et al. 2012). Mountainous terrain in the Planning Area provides extensive wolverine habitat and scavenging opportunities on wolf -killed moose and goats. Wolverine population levels are naturally low compared to other predators, however due to extensive suitable habitat in the area, the wolverine population is probably stable at low numbers (Sell 2013).

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, buses 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.

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.

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	--

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 vertical distance. 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 Jilk̲aat K̲waan, 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'ak̲yé (Haines Airport) and Lk̲oot (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). Goats in these areas were also important for their food value as well as for their horns, which were used for making spoons. 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 10 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 by 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 Alaska 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 3.4). 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 3.5). 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 3.6). 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 3.7, 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, 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 removing the MCA designation, 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 designation 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 if goat population objectives are met. 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. Up to 5,500 winter landings occurring outside of the 1,500-meter buffered high-use winter mountain goat habitat could be achieved within the first year and annually. Up to 1600 winter landings within the high use winter mountain goat habitat would be permitted at year 1 and would be monitored for 4 years before an increase in permits within this buffered habitat would be considered. Growth within this buffered habitat could take a minimum of 9 years to reach the maximum allowable annual landings. Winter landings within and without the 1500 meter buffered high use winter mountain goat habitat count toward the maximum 5,500 winter landings.

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, see Table 3.1, Annual Historical Permitted Helicopter Use) that 11,000 landings would be permitted, the incremental permit periods (4-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 recreation 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 recreation SRPs compared to Alternative A, 12,329 acres open to helicopter-supported recreation SRPs as compared to Alternative E, and a reduction of 65,467 acres open to helicopter-supported recreation 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 numbers 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 mpacts 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 could 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 mountain goats:

- 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 modeled 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 (November 15 to April 30) 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).

Effects associated with brown bear denning disturbance:
Through literature review, the Montana/Northern Idaho Level 1 Terrestrial Biologists Team identified guidelines addressing effects to grizzly bears resulting from helicopter activities. The team suggested if the duration of the low altitude helicopter use is extended (occurs over a 48-hour period), and the effects are not relaxed (multiple trips, passes, or sweeps each day), then the operation is generally likely to have adverse effects to grizzly bear (Anderson et al. 2009). Activities such as helicopter logging, heli-skiing and heli-touring were specifically identified as likely to lead to such adverse effects. Disturbance during the denning period may lead to physiological and behavioral stress and in some cases den abandonment. Swenson et al. (1997) reported winter den abandonment by brown bears in 9% of 194 bear winters resulting from 68 radio-marked bears in Sweden and Norway. Most den abandonment was noted early in the denning period with no statistical difference between males and females. Reproductive success was affected by den abandonment as cub survival was reduced as a result of relocating to another den site. No significant difference in abandonment was noted for bears protected from disturbance such as military and timber harvesting activities. However, Linnell et al. (1996) suggested brown bears show some tolerance for industrial activity so long as the noise source is some kilometers away from the den. Den abandonment was much greater when human activity was in close proximity to den sites. In an effort to minimize den abandonment, Swenson et al. (1997) recommended an avoidance distance of known active den sites of greater than 100-m and perhaps up to 1 km.

Crupi (2017) stated the majority of brown bears in the Haines area have entered their den by the 2nd week of December and have emerged by the 2nd week of April. With the majority of heli skiing occurring between mid-March and late April, brown bear den abandonment is less likely as research suggests abandonment occurs early in the denning period (Swenson et al., 1997). While helicopter overflights and landings may disturb brown bears, the effects are not likely to cause population declines with implementation of mitigating terms and conditions. Permit stipulations common to all alternatives require a 500-meter separation distance from wildlife (to include brown bears and known den sites). Additionally, authorized operations shall not hover, circle or harass wildlife and all flights shall operate within designated flight corridors and elevation restrictions. Conservation benefit to brown bears will also result from ROPs and permits stipulations specific to other species.

Effects associated with bald eagle disturbance:
Potential impacts to bald eagles could occur from noise or close visual approach near flight routes of aircraft or landing sites in both summer and winter. Bald eagles nest and forage along the shorelines of upper Lynn Canal, and also nest in the Planning Area. Management guidelines outlined by the USFWS (USFWS, 2007a) specify that helicopters should maintain a minimum distance of 1,000ft 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, in place, none of the alternatives would adversely affect bald eagles.

Effects associated with wolverine disturbance:
Wolverines den and use habitats at mid-level elevations in winter (Lewis et al. 2012) and could be affected if helicopters landed nearby as dens would not be easily detectable for conscious avoidance. Population levels and trends of both wolverine and brown bears are poorly known for the area. Wolverines exist at very low densities throughout their range (Sell 2013) and are known to be intolerant of human activities (Krebs, Loforth, and Parfitt, 2007).

While helicopter overflights and landings near denning areas may disturb wolverines, the effects are not likely to cause population declines with implementation of mitigating terms and conditions (minimum flight distances). Permit stipulations common to all alternatives require a 500-meter separation distance from wildlife (to include wolverine). Additionally, authorized operations shall not hover, circle or harass wildlife and all flights shall operate within designated flight corridors and elevation restrictions.

Climate Change
The effects of climate change previously described in the affected environment could influence the rate or degree of potential direct and indirect impacts. The impacts of climate change are likely to vary by species, but in general, climate change will introduce significant uncertainty in predicting demographic trends of species in the area and will make the predicted impacts of permitted activities more difficult to accurately assess. However, White et al. (2018) did indicate that in 5 of 10 climate change related modeled scenarios, local extirpation was likely by 2085 for mountain goats in coastal Alaska. Warmer summer temperatures and the resulting decreased forage quality did not offset the benefits of reduced winter snow-fall. Additionally, extirpation is more likely for smaller initial populations.

Through the adaptive management strategy, existing mitigation measures may be modified and new mitigation measures created as wildlife data and supplemental 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

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 one-quarter of the recently reported landings occurred in one geographic area while other terrain received one or two landings over the course of the permitted season. Assuming similar use of previously reported landing sites, much of the modeled high-use habitat on BLM-managed lands within the Takinsha region would not be affected. However, if the intensity of helicopter use is high and prolonged within the smaller geographic area and is being utilized by wintering mountain goats, physiological and behavioral stress is likely. At the time of permitting, when specific ski runs or drop-off and pick-up landing locations and flight corridors are identified, a more accurate calculation of effects can be determined. Predetermined or predicted flight routes accessing terrain in winter months will help to avoid or minimize impacts.

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). Additionally, the requirements of the ROP does not allow for the landing or flying of helicopters within 1500-meters of known mountain goat kidding areas between May 1 and June 15. At the time of permitting, when specific landing locations and flight corridors are identified, a more accurate calculation of effects can be determined.

ACEC-RNA
Creation of an approximately 102,257 acre ACEC-RNA would preclude permitted helicopter use and the noise and disturbance associated with such within that designated area. The boundary would include the previously identified MCA with the addition of lands on Takshanuk Ridge near Iron Mountain. 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 30,738 acres of modeled high-use winter mountain goat habitat within portions of the Takshanuk, Chilkat-Ferebee, Mount Raymond, and Hiteshitak regions. 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. Additionally, 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.

Impacts to brown bear denning, wolverine, and eagles
Under this alternative, up to 300 winter landings would be authorized in the South Block. Based on past annual heli-skiing reports, nearly one fourth of the recent landings occurred in one geographic area while other terrain received 1 or 2 landings over the course of the permitted season. If the intensity of helicopter use is high and prolonged within close proximity to an active den site, those adverse effects as previously described, are likely.

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 brown bear denning, wolverine and eagles.

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. At the time of permitting, when specific ski runs, drop-off and pick-up landing locations and flight corridors 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). At the time of permitting, when specific ski runs, drop-off and pick-up landing locations and flight corridors are identified, a more accurate calculation of effects can be determined. Predetermined or predicted flight routes accessing terrain in winter months will help to avoid or minimize impacts.

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. However, if the intensity of helicopter use is high and prolonged within the smaller geographic area and is being utilized by wintering mountain goats, physiological and behavioral stress is likely

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). Additionally, the ROP does not allow for the landing or flying of helicopters within 1500-meters of known mountain goat kidding areas between May 1 and June 15.

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 permitted activities and the impacts and disturbances associated with permitted helicopter use are likely.

Impacts to brown bear denning, wolverine, and eagles
Impacts would be similar to that as previously described, however, with a 900 percent increase in the number of landings possible, increased helicopter disturbance and human activity leading to adverse effects is more likely. By applying the ROPs and SRP terms and conditions found in 2.2, impacts to brown bear denning and wolverine resulting from this alternative and the permitted authorizations would be mitigated. This alternative and the resulting permitted authorizations would have negligible effects on eagles.

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. At the time of permitting, with specific ski runs, drop-off and pick-up landing locations and flight corridors identified, a more accurate calculation of effects can 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 (See Table 2.2). 1,600 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 could 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 outside of buffered high- use habitat. Incremental increases within buffered high-use habitat after four year periods will allow lag time to quantify impacts to mountain goat populations should they exist at current authorized levels. In coordination with ADFG and subject matter experts, it was determined that a 4-year period of time was 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. At the time of permitting, when specific ski runs or drop-off and pick-up landing locations and flight corridors are identified, a more accurate calculation of effects can be determined. Predetermined or predicted flight routes accessing terrain in winter months will help to avoid or minimize impacts.

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. Impacts associated with permitted activities are likely to be most pronounced

within those geographic regions with low mountain goat populations.

Summer
Under this alternative, up to 5,500 summer landings would be authorized in the Planning Area through incremental increases (See Table 2.2). 2,400 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 4-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). Additionally, the ROP does not allow for the landing or flying of helicopters within 1500-meters of known mountain goat kidding areas between May 1 and June 15.

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.

Impacts to brown bear denning, wolverine, and eagles
Impacts would be similar to that as described in Alternative E, however, with a 1,733 percent increase in the number of landings possible, increased helicopter disturbance and human activity leading to adverse effects is more likely. While this activity is likely to disturb brown bear denning and wolverine, the effects are not likely to cause population declines. By applying the ROPs and SRP terms and conditions found in 2.2, impacts to brown bear denning and wolverine resulting from this alternative and the permitted authorizations would be mitigated. This alternative and the resulting permitted authorizations would have negligible effects on eagles.

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. At the time of permitting, when, 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 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	2,400	20	0	120	2.50	0
E	2,400	20	0	120	2.50	0
F	3,000	26	6	120	3.25	25
G	5,500	46	20	120	5.75	129

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	0.5	0
E	300	4	4	120	0.5	0
F	3,000	26	22	120	3.25	900
G	5,500	46	42	120	5.73	1,733

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	1,600	14	10	120	1.75	433
3	3,600	30	16	120	3.75	125
9	5,500	46	6	120	5.75	53

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	2,755.793
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	8,818.537
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	1,609.38

[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	NO2	SO2	PM10	PM2.5
TOTAL	1.81	0.31	1.81	0.45	0.72	0.65

Table 4.8 Alternative F Annual Helicopter Emissions

	CO	VOC	NO2	SO2	PM10	PM2.5
TOTAL	4.03	0.69	4.03	1.00	1.60	1.44

Table 4.9 Alternative G Annual Helicopter Emissions

	CO	VOC	NO2	SO2	PM10	PM2.5
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
It is recommendation that 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 an 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 an SRMA, which includes the Takshanuk Ridge.

Cumulative
Because this alternative would create an 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.

4.9 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, such as 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, such as 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 2,400 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 2,400 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 2,400 landings could bring in up to $4,881,600 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, after the first four years of a permit cycle, revenues for the industry would increase by approximately $4,068,000. This would increase up to a maximum of 5,500 summer landings netting a revenue of approximately $11,187,000 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 2,400 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 $1,017,600 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 after the first four years of a permit cycle it would increase revenues for the industry by approximately $1,272,000. 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, such as 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.

4.10 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 an 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.

4.11 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, 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 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.

4.12 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.

4.13 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 five-years. Short-term uses could include these same actions, but on a limited basis, such as mining exploration or development that lasts for five-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).

In July, 2018, BLM engaged the USFWS through their on-line Information for Planning and Consultation platform in which a list of threatened, endangered or candidate species were provided. The list included zero species in the planning area. Additional conversations were had with employees of the Anchorage Fish and Wildlife Conservation Office and the Juneau Satellite Office.

Coordination with the ADFG has been ongoing throughout the planning process with numerous face-to-face and telephonic conversations and open-house forums.

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 publication of the news release announcing the planning process was starting again:

- 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 public 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 planning process for the Ring of Fire Amendment was beginning and the corporation was 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.

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
Bruce Seppi	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

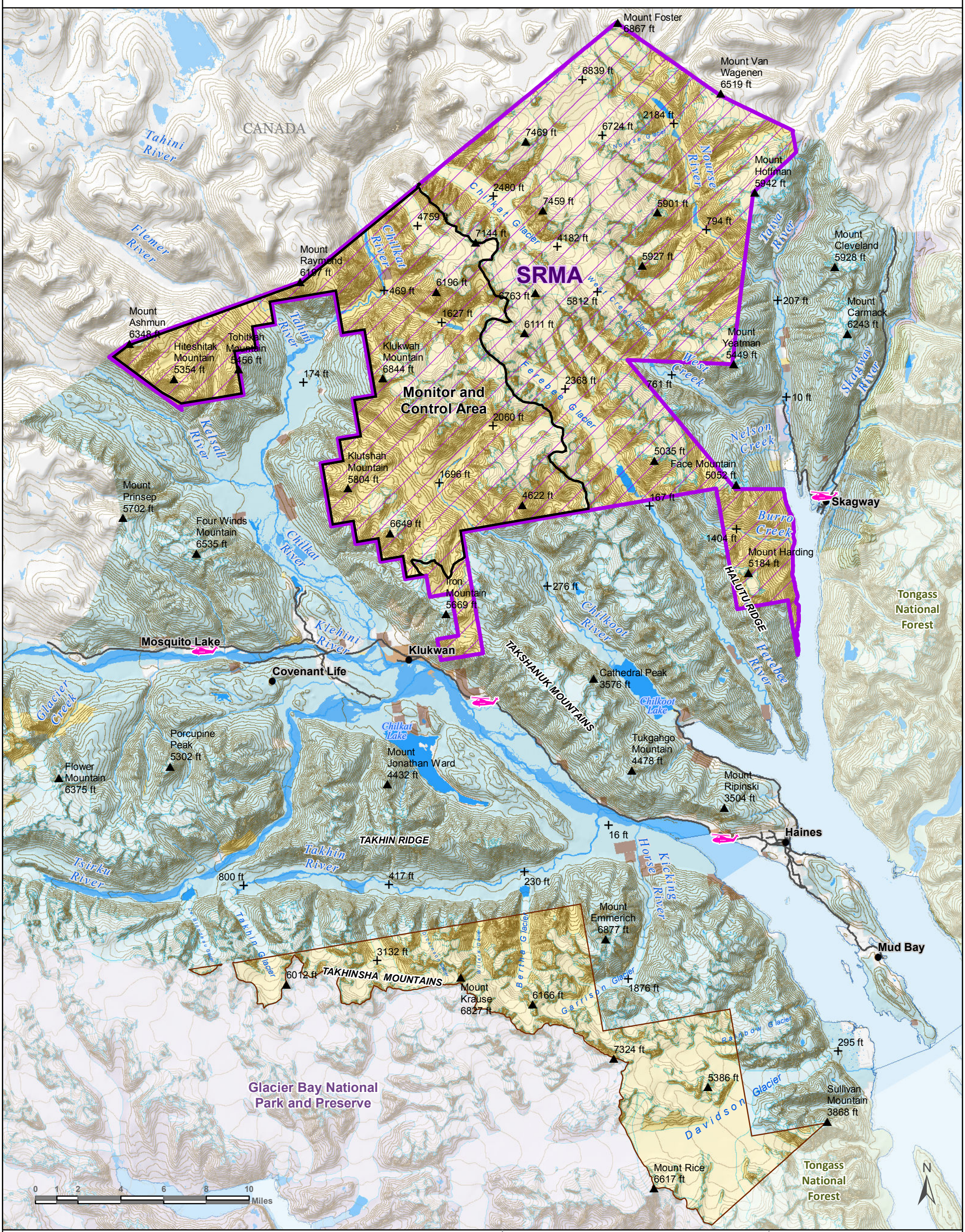
- North & South Blocks
- Bureau of Land Management
- State of
- Alaska Native Allotment
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- Heliports
- Road/Highway
- Summit
- Low point

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 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

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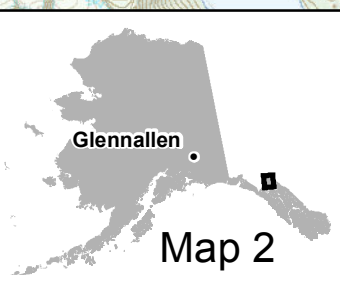

Haines Planning Area- Alternative E

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

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

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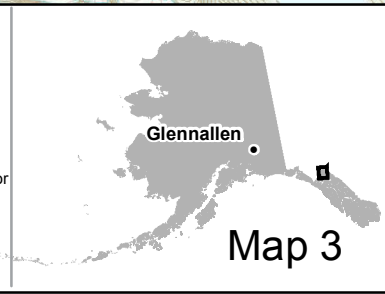


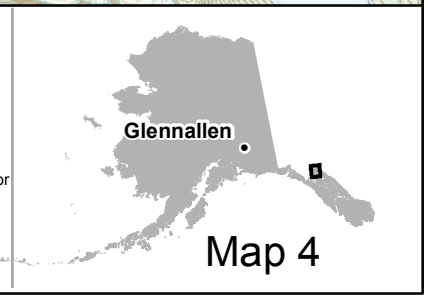
Map 3

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

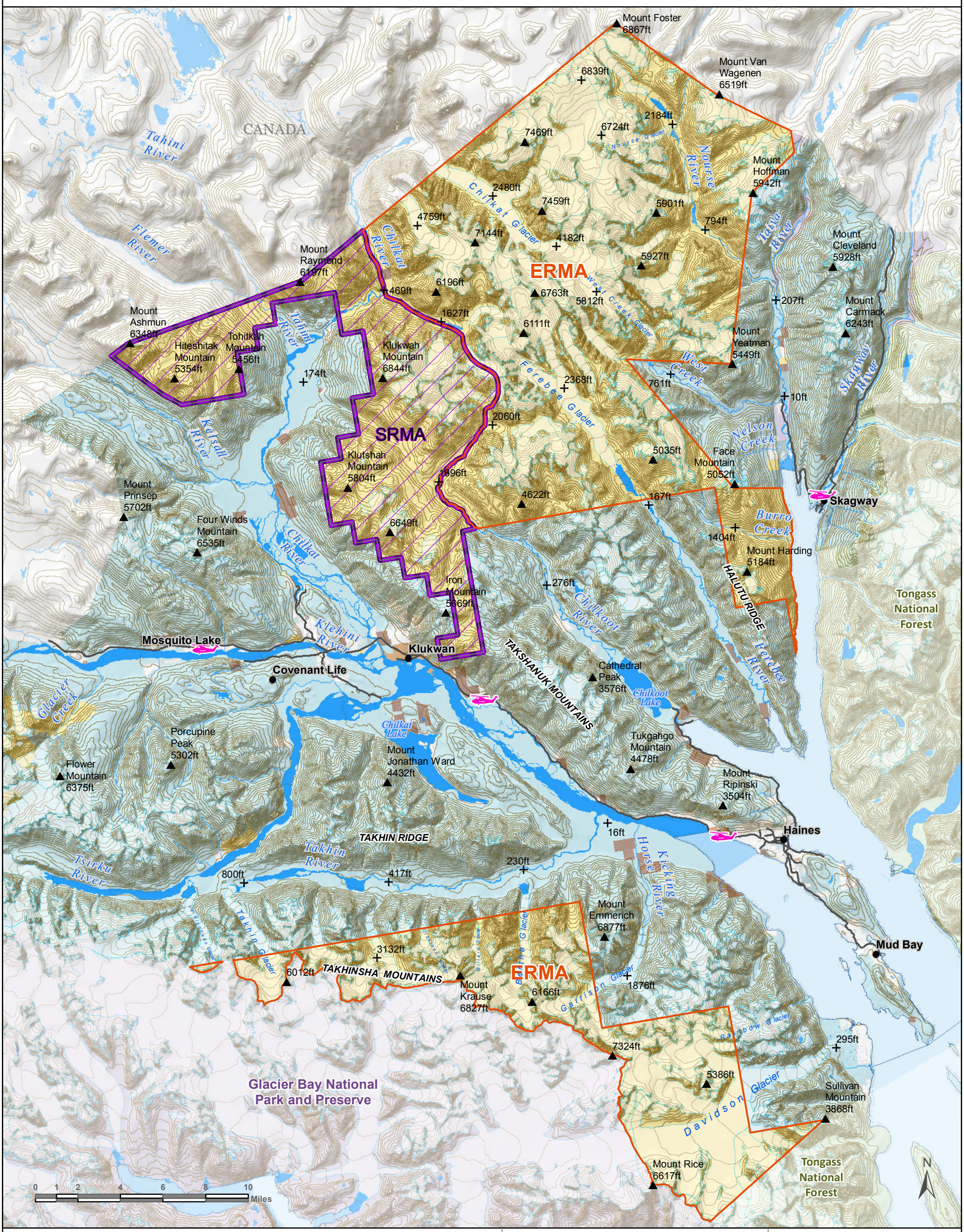
Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product 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

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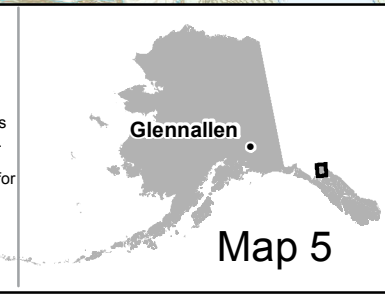
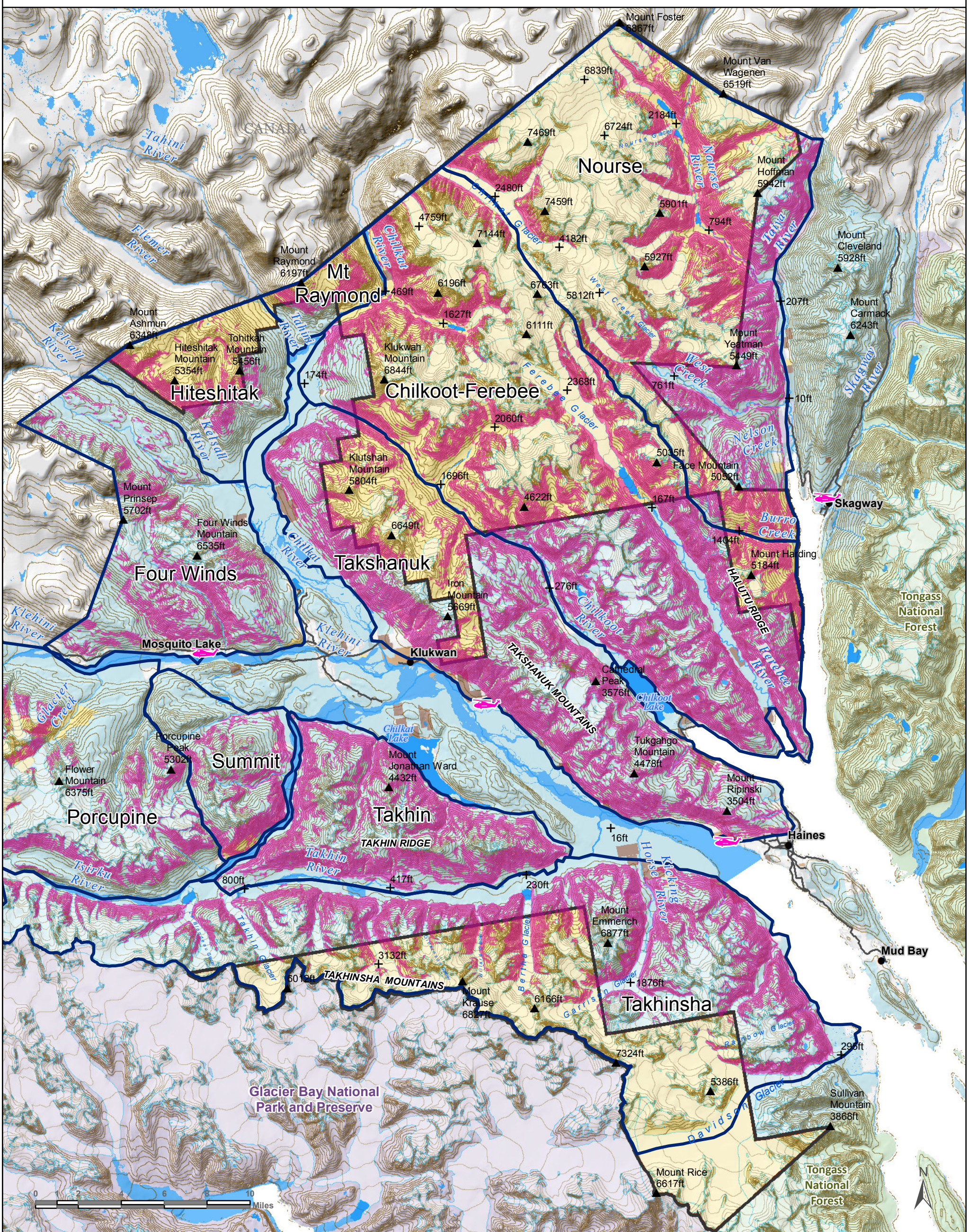


Map 5

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 High Use Winter Habitat
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
North & South Blocks

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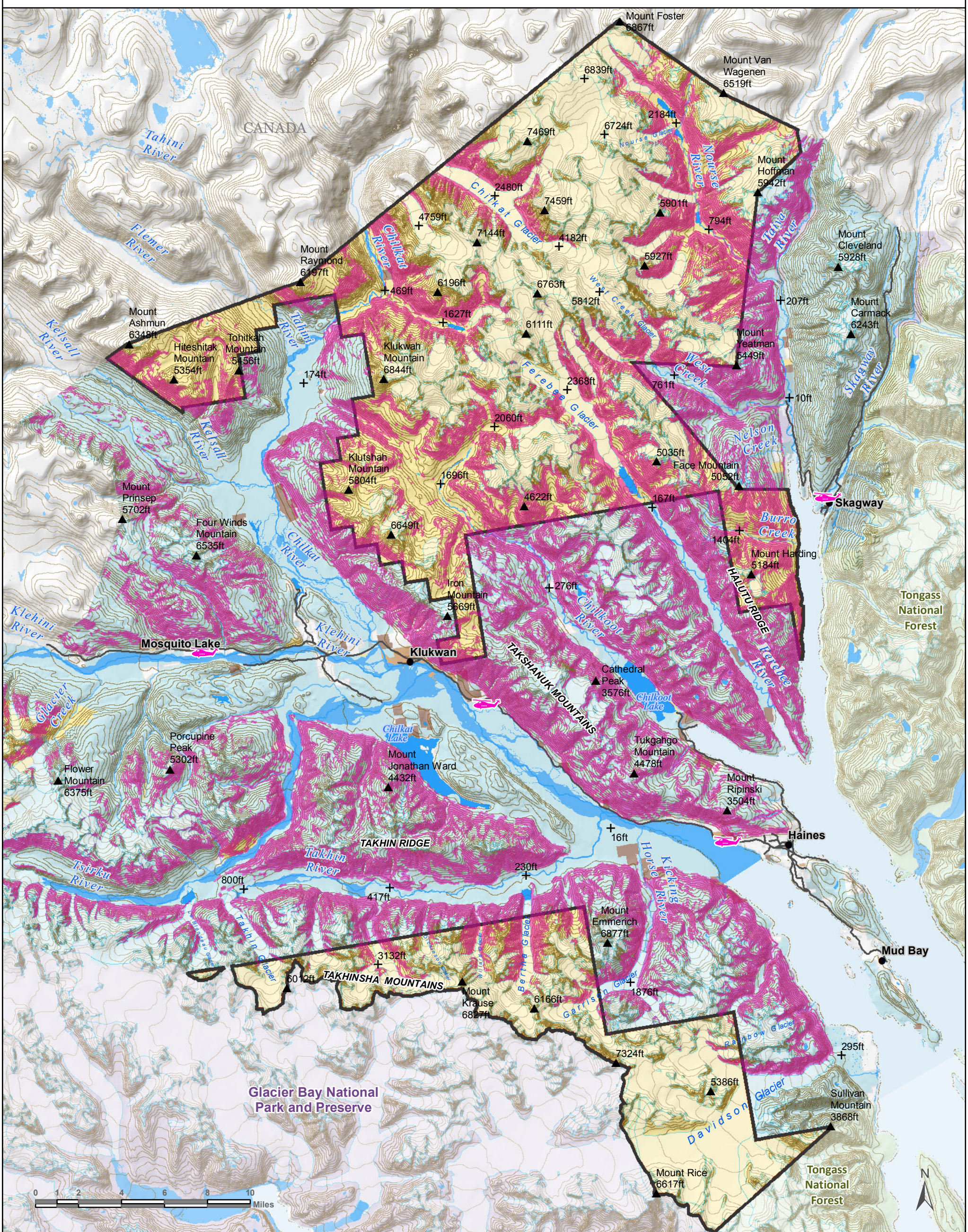
Map 6

Haines Planning Area- Mountain Goat Winter Habitat

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



- Mtn Goat High Use Winter Habitat
- 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
- North & South Blocks

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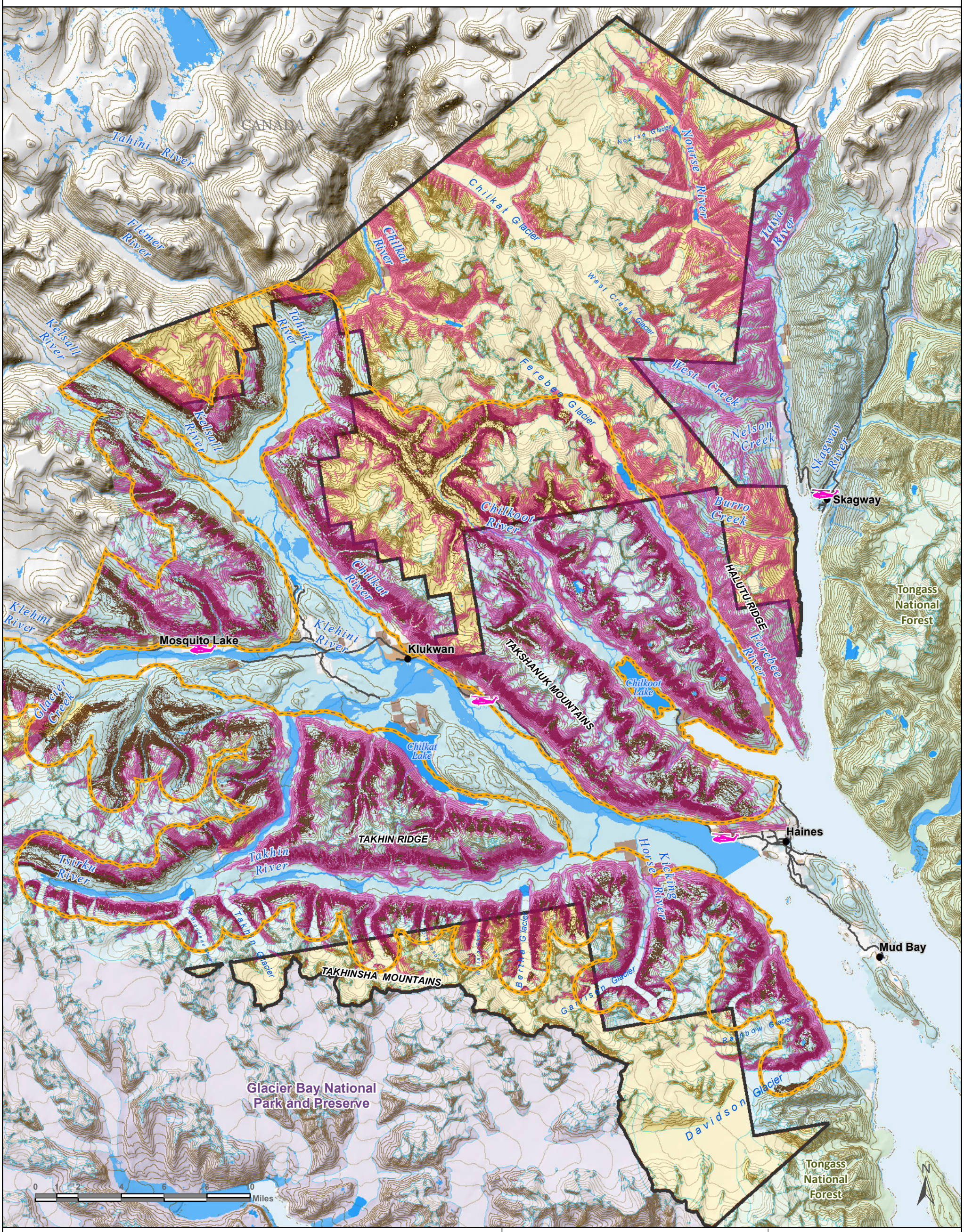
Map 7

Haines Planning Area- Mountain Goat and Brown Bear Winter Habitat

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



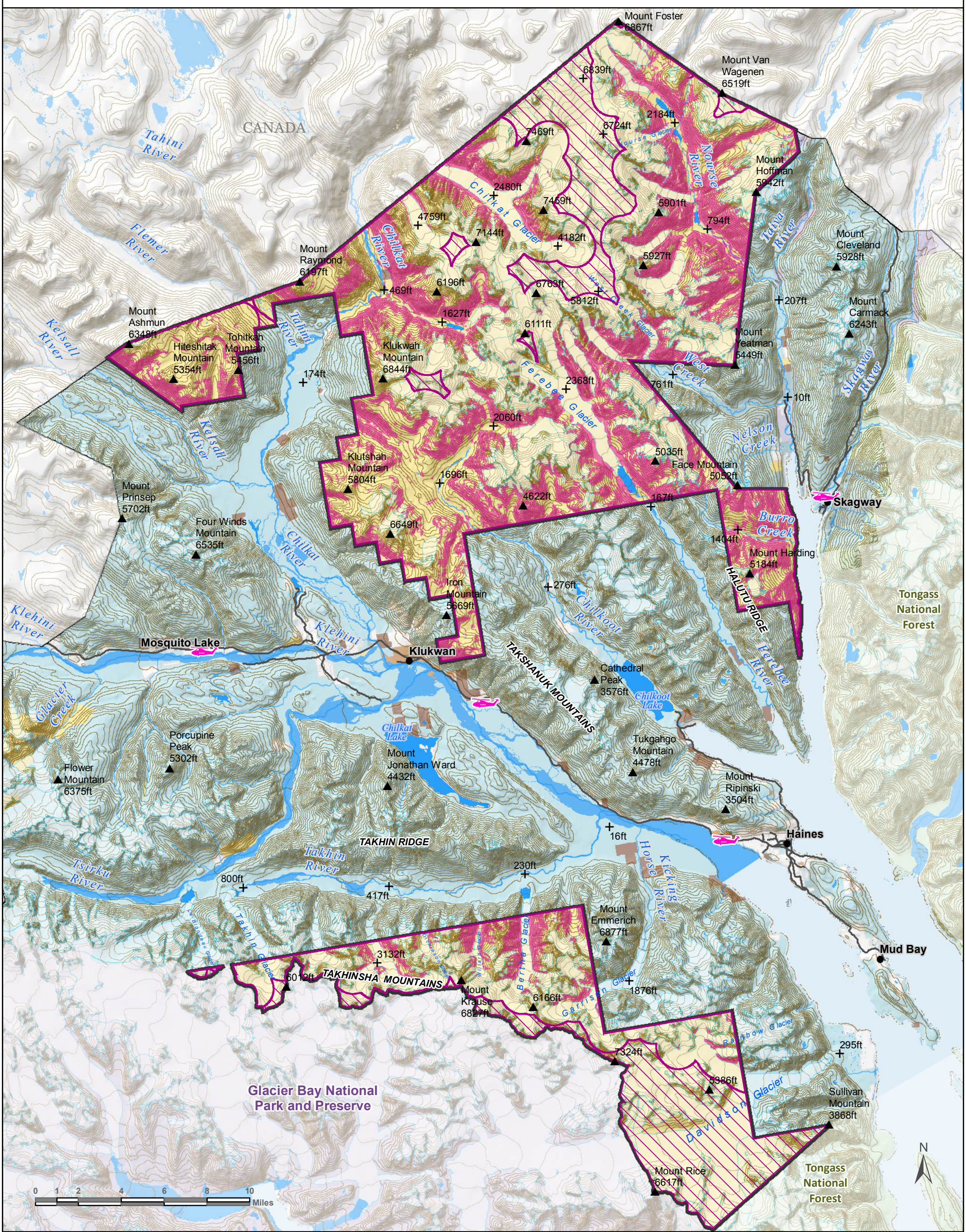
- Brown Bear Study Extent
- Mtn Goat/Brown Bear Habitat Overlap
- Mtn Goat High Use Winter Habitat
- Brown bear den
- Bureau of Land Management
- State of Alaska
- Alaska Native
- Alaska Native Corporation
- Forest Service
- Local Government
- National Park Service
- Private
- Water
- Heliports
- Road/Highway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

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 8

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

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



- Mtn Goat High Use Winter Habitat
- Mtn Goat Winter Habitat Buffer-1500m
- Areas Outside 1500m Buffer
- 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
- Other Elevation
- North & South Blocks

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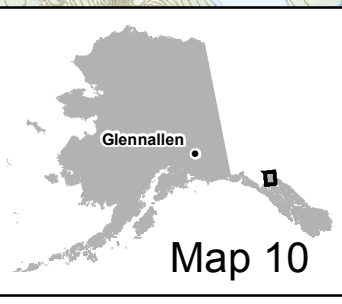
Haines Planning Area- Historic Trade Routes

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

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

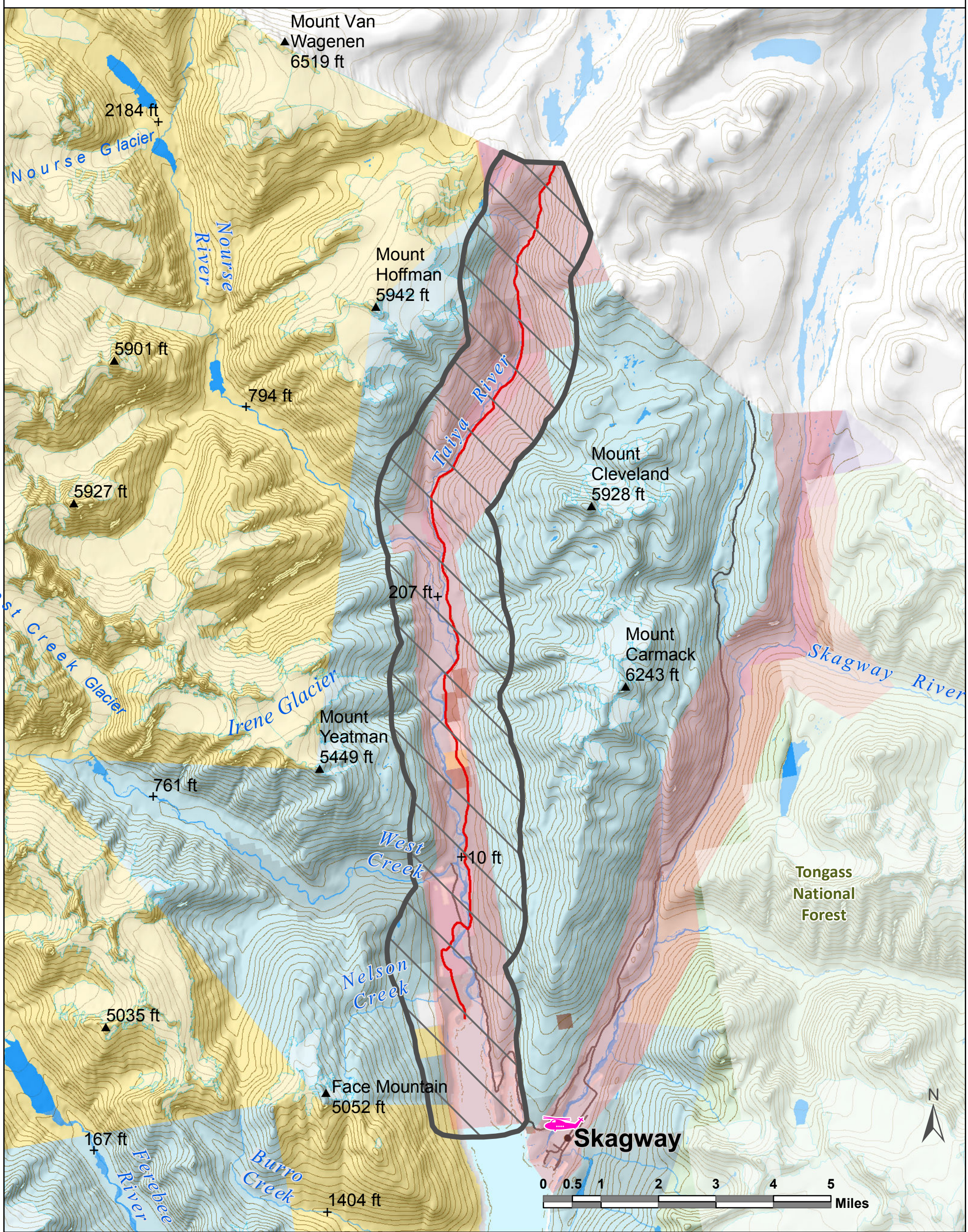
Disclaimer: No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product 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 10

Haines Planning Area- Chilkoot Trail, plus 1500 meter Buffer Zone

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



Chilkoot Trail Buffer- 1500 meters
Chilkoot Trail
Chilkoot Trail National Historic Landmark
Road/Highway
Bureau of Land Management
State of
Alaska Native Allotment
Alaska Native Corporation
Forest Service
Local Government
National Park Service
Private
Water

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 11

APPENDICES

APPENDIX A: BLM Ring Of Fire Resource Management Plan Amendment/Final EIS Public Comments

Comment Number	Comment	Response
HA-1-500000088	IN FAVOR of Alternative G	Thank you for your comment
HA-1-500000217	I support the preferred alternative G which allows helicopter activities in the haines area. I would like to see more areas and landing allowed for the Heliskiing industry because this activity is currently an allowable use at very low levels. The current volume of allowable use on BLM lands is not sustainable and the Heliskiing industry needs more landings than what is currently available in order to be able to generate enough revenue to cover the expense of operating a heliski business. Right now the level of allowed use is so low that heliskiing on BLM lands cannot afford itself.	Thank you for your comment. The potential economic implication of each alternative is analyzed in Section 4.10.
HA--1-500000268	I would first like to say thank you to all who put in a shit ton of work on the 107-page document. Well done. I have been a heli ski guide and hunting guide in the Haines area for the past 9 years. At the moment only having 100 landings in the BLM per each heliski operator does three things that I can see. Safety - The BLM area can hold some of the best snow quality and snow stability when conditions are not favorable in other areas. As guides we don't have the option to go into these areas when other areas outside the BLM are simply not safe to go to. Congestion - Over the years our operating area has been shrinking due to the local politics but the demand is rising. With three operators in the valley we need more area to ski in order to give each other space so we are not skiing on top of each other. Feasibility: Currently with only 100 landings for the company I guide for it's simply not worth booking the number of clients we could get to our beautiful area. I'm in support of the preferred alternative G.	Thank you for your comment
HA-1-500000292	TEMSCO supports the increases in helicopter supported recreation in the planning area as lined out in both Alternative G and Alternative F. We feel that the criteria for the development of an Area of Critical Environmental Concern are not met in any location in the planning area.	Thank you for your comment

Comment Number	Comment	Response
HA-1-500000292	While we support Alternative G, it should be noted that this alternative will bring a significant (33%) decrease in the first year on summer landings in the North Block. This reduction disproportionately affects TEMSCO as the holder of most of those landings. TEMSCO does not feel this is appropriate and asks that if Alternative G is selected, at least 2400 landings are permitted for the first year, which is the current permitted level.	Thank you for your comment. Alternative G has been amended to start summer permitting at 2400 landings. See Table 2.2.
HA-1-500000292	I invite you to page "v" of the DEIS Executive Summary. "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."	Thank you for your comment. In the FEIS the 3-year period was amended to 4 in Alternative G (see Table 4.3). This 4-year period better aligns with the age at first reproduction for mountain goats and better enables BLM to the asses the effects of increases in activity.
HA-1-500000292	While three years is an appropriate time to study wildlife and make associated decisions, TEMSCO has been operating on BLM lands for 30 years. Over this period, as outlined in TABLE 3.1, there have been many more landings than 1600 per year utilized. Also, during this period there has been an established monitoring and control area (MCA), and ample studies on the local goat population. We feel that these historical studies have provided much more than three years' worth of new data.	Thank you for your comment, Although more than 1600 annual summer landings have occurred in the planning area in years past, recent utilization since the 2012 DEIS reveal an average utilization of approximately 175 summer landings. (See table 3.1). Within the preferred alternative, incremental increases are proposed for each season of use as a way to control for variability should monitoring efforts reveal effects to metrics such as those identified in the adaptive management strategy (See 2.2.3 and Appendix D).
HA-1-500000292	It is inappropriate to take away landings to then study incremental increases when there exists enough data from historical use and studies. Under the current proposed alternative, we will have to rely on new data every three years to possibly increase landings back to our current level. TEMSCO understands a slow increase in permitted landings but doesn't feel it should be preceded by a 33% decrease, and less means to appropriately study the animals with the elimination of the MCA.	Thank you for your comment. Alternative G has been amended to start summer permitting at 2400 landings. See Table 2.2.

Comment Number	Comment	Response
HA-1-500000293	Overview Thank you for the opportunity to comment on the Ring of Fire (ROF) Supplemental Draft Environmental Impact Statement (SDEIS) for the Haines Amendment to the Ring of Fire Resource Management Plan Amendment (https://eplanning.blm.gov/epl-front-office/projects/lup/100842/171880/208946/Supplemental_Draft_EIS_for_the_Haines_Amendment_to_the_Ring_of_Fire_RMP.pdf). Please accept these comments on behalf of Audubon Alaska, the state office of the National Audubon Society. Audubon Alaska has been focused on protecting the wildlife resources of the Chilkat valley for over 40 years. One of our first actions was working collaboratively with the state of Alaska to designate the Alaska Chilkat Bald Eagle Preserve in 1977. We remain committed to protecting this important area for the specialized relationship between bald eagles and salmon that creates the largest congregation of Bald Eagles in the world. We value the natural characteristics of the Chilkat and Chilkoot valleys that are vital to our members and their livelihoods and interest in the region. Audubon Alaska represents 8,000 members of local chapters, the state office, and a national organization with 800,000 members. Audubon uses sound science (repeatable, based on established protocol) to inform our advocacy, and we emphasize the need for public involvement in development activities that affect all Alaskans, and people interested in Alaska's vast public lands.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-500000293	In summary, we support the following actions in the SDEIS: 1. Accept Alternative E with the following additions: a. Maintain and expand the Area of Critical Environmental Concern (ACEC) to encompass all of the existing Monitoring and Control Area (MCA) Change the designation of both the north and south blocks from Extensive Recreation Management Area (ERMA) to Special Recreation Management Area (SRMA) Prohibit summer helicopter-supported recreation and helicopter-supported industrial activity in the south block Propose a Research Natural Area boundary consistent with wolverine, goat, and bear population data from the most relevant scientific studies done by the Alaska Department of Fish and Game Maintain the MCA (as the combined ACEC-RNA under alternative E) status across all alternatives and in the final planning rule that provides consistency with the agency mandate to protect resources.	Thank you for your comment, Alternative E has been modified to encompasses all of the MCA as an ACEC. The analysis of this notation can be found in the appendix C of the final EIS.
HA-1-500000293	Do not eliminate ACEC designation because of current political pressure from BLM headquarters or the Alaska delegation We support the comments submitted by the Takshanuk Watershed Council and Lynn Canal Conservation, as they also represent the local voices of people across the Haines/Klukkwan areas that would be most impacted by increases in helicopter activities, bear the brunt of detrimental impacts to goat populations and traditional use areas, and experience the most direct changes to areas across their local landscapes. Figure 1: Outline of SRMA and ACEC designations that Audubon Alaska supports as part of SDEIS planning. These are approximate boundary locations to be used for reference.	Thank you for your comment

Comment Number	Comment	Response
HA-1-500000293	Audubon Alaska is most concerned with the BLM's current rush to lift all ACEC designations across D-1 lands in the state of Alaska. These designations were done during the Resource Management Planning processes for each planning area across the state, in consultation with local communities, Alaska Indigenous Peoples, and the public. Now, these areas are being systematically released for short-sighted, mineral entry opportunities under the guise of planning rule revisions. We realize the Resource Management Plan for each region is final step in public process for explaining the importance of the ACEC designations. We also note that BLM is required to establish ACEC if resource protection is required. FLPMA 43 U.S.C. 1701 requires BLM to give priority to the designation and protection of ACEC's. The BLM Manual at 1613.02 mandates BLM "establish special management measures to protect [significant] values." 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), emphasis added). 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 many other wildlife conservation advocates, it will prioritize the requested ACEC designation as mandated, and select Alternative E as the preferred alternative.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.
HA-1-500000293	"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))". We also note that Alternatives F and G would remove the only protections for wildlife in the entire planning area within 0-5 years, thus illustrating that the viability of diverse mountain goat populations is not possible given the best available scientific research.	Several "protections" are in place for wildlife within the planning area. Please see Section 2.3 which describes management actions common to all supplemental alternatives and the resulting ROPs, permit stipulations and terms and conditions.

Comment Number	Comment	Response
HA-1-500000293	Alternative E will protect the ACEC designation that is relevant because it includes “goat habitat that is essential for maintaining mountain goat diversity, significant cultural resources important to maintaining Chilkat goat wool weaver traditions.” The ACEC objective is to “serve as a wildlife refugia and provide for, monitor and control Haines Planning Area mountain goat and other wildlife populations.” It will also protect sensitive cultural use areas along Takshanuk Ridge and the Chilkat River.	Thank you for your comment
HA-1-500000293	We would like to recognize that the ACEC-RNA and MCA planning framework should be left intact, and if not, that an entire planning process should be undertaken because this would represent a significant planning rule change.	Alternative E has been amended to include the entire MCA within the a ACEC-RNA. Alternatives A and F include the MCA. The BLM prepared and circulated a draft EIS, prepared and circulated a draft supplemental EIS, and has now prepared a final EIS. No additional planning process is required.
HA-1-500000293	Finally, we would like to request that all spatial data for the DEIS, SDEIS, FEIS, and associated planning activities be made publicly available on the SDMS website and through BLM project portals.	The DEIS, SDEIS are currently available through ePlanning. The FEIS will be posted on ePlanning on the project page once completed.
HA-1-500000293	Thank you for the opportunity to comment on this process. Thank you in advance for the spatial data so we can continue to monitor and evaluate the project as members of the public. We look forward to continuing our engagement with the agency and local community partners throughout this process.	Thank you for your comment
HA-1-500000294	Please accept these written comments regarding the Ring of Fire Draft Management Plan/Draft Environmental Impact Statement for the Haines Block Planning Area.	Thank you for your comment
HA-1-500000294	We reaffirm our previously submitted comments (May 2018), supporting the BLM’s 2012 Plan Amendment conclusion that the area does not qualify to be designated as an ACEC and no new information would change the BLM’s 2012 findings or support a relevance or importance finding needed to designate an ACEC.	Thank you for your comment, the supplemental draft includes nominated and analyzed ACECs, one of which meets the relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-500000294	We support increasing the number of winter and summer recreational helicopter landings. This would allow for important economic growth and increase safety by opening alternative terrain and reducing the potential for congestion. We support further study of goats and other wildlife species in the Haines Block. We also support incremental increases to permit allocations for operator(s) if consistent with your regulations to prevent the 'unnecessary or undue degradation of the lands'. We appreciate the clarification that the Haines Amendment applies only to recreational use permits and does not include any changes to exploration and mining activities which are cited as important uses of the lands under the 2008 Ring of Fire Management Plan.	Thank you for your comment
HA-1-500000294	Regarding ROP #16, we appreciate the 2018 update to the 2012 draft, removing the prohibitive ½ mile buffer to modelled habitat. We also reaffirm the data submitted in our previous comment that suggest the ADF&G winter Resource Selection Function (RSF) 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. Therefore, all reference to RSF model habitat in the Ring of Fire Management Plan and EIS should be described as 'potential' habitat (i.e. potential high-use winter habitat) until data are available to refine the model.	Information has been added in the FEIS to define an RSF model and its intended use, please see Section 3.3.
HA-1-500000294	These comments are all consistent with Alternative G, the agency preferred alternative, and the updated ROP #16.	Thank you for your comment

Comment Number	Comment	Response
HA-1-500000295	I appreciate that BLM has declared that the area nominated as an Area of Critical Environmental Concern (ACEC) meets the qualifications to be designated an ACEC. I support the creation of an ACEC for the following reasons: BLM admits that "Little is currently known of the specific short- or long-term population trends of mountain goats in the Planning Area." (SDEIS, page 38) It is imperative that BLM continue to study the impacts of human disturbance on wildlife, especially mountain goats and brown bears. The focus of the ACEC as a Research Natural Area would be research. In order to conduct comparative studies between human disturbed areas and non-disturbed areas, a control area' is necessary. An ACEC provides this control area. Local (the Haines Borough), state and federal land managers would be prepared to make better management decisions regarding helicopter supported recreation if wildlife studies continue in the ACEC and other parts of the borough. A better balance of land uses would result from the establishment of an ACEC in addition to recreation managed areas.	Thank you for your comment
HA-1-500000295	In addition to an ACEC, I do not see the justification for exponentially increasing the heli-ski landings in the South Block. Historical past use show the heli-ski companies have not needed all of the current allotments so these allotments should stay the same.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Alternatives A and E analyze the current permit use. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be three (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.
HA-1-500000295	Also, helicopter summer tours originating out of Haines should be disallowed.	The BLM has no jurisdiction on helicopter take off and landings permitted within Haines Borough administered lands. Please refer to sections 3.4 and 4.3 in the Supplemental Draft EIS.
HA-1-500000295	Please adopt a plan that designates an ACEC to ensure that future generations can enjoy the wide diversity of wildlife we currently enjoy in the Chilkat Valley.	Thank you for your comment

Comment Number	Comment	Response
HA-1-50000032	I am submitting this form to indicate my support for Alternative G outined in the Ring of Fire supplemental draft EIS. I have traveled to the area several times for the purpose of backcountry recreation and would like to see additional seasonal landings allowed.	Thank you for your comment. Alternatives F and G allow for increased landings.
HA-1-515484	Southeast Alaska Backcountry Advenutres is (SEABA) in favor of Alternative G (preferred Alternative) with the BLM permitting 5,500 landings for winter Helicopter skiing. Though 5,500 landings might seem like a lot it really is not, as an operation we could go through 100 landings in 2 days. Being able to operate in these areas in the south block is vital to our business development and economic opportunities in Haines.	Thank you for your comment
HA-1-515484	Heli ski guiding is about showing people from all over the world this unique beautiful area that they would not otherwise see without our services. We are stewards of the land and want the wildlife and resources preserved for future generations to enjoy. So, the last thing we want is to harm the environment or wildlife in any way. That is why we would be willing to designate our landings and pickups to specified locations so the helicopter landings stay the same reducing our impact if any on the wildlife.	Landings and pickup zones are provided to the BLM annually. Specified locations can be addressed in permit stipulations.
HA-1-515484	The economic implications are huge, we currently own 2 property's in the mountains that cannot be devolved with remote lodges without access to BLM land in the South Block. People come Haines from all over the world to ski the Chilkat mountains. Each spending upwards of $7600 for one week. All of which is taxable revenue to the Haines community. This terrain is a major selling point for our business making us competitive in the international markets. Most notably against Canada that can generate millions of taxable revenue in British Columbia alone from the heli ski industry. Mainly because their government supports there heli ski industry by giving operations the land they need to operate effectively.	The potential economic implication of each alternative is analyzed in Section 4.10.

Comment Number	Comment	Response
HA-1-515484	Heli skiing is a low impact activity that doesn't take recourses from the mountains nor do we negatively impact the mountain areas. All we are doing is making turns on snow that will melt away in the spring time. As far as industry for a community goes, heli skiing has low impacts with great economic advantages. Please support us with access to our public lands allowing us to show people from around the world these areas to they can appreciate them and protect them for future generations.	Thank you for your comment
HA-1-515540	I have been a client of SEABA in Haines for many years and have seen 1st hand how such previously limited BLM landings has affected the experience in the backcountry. Sometimes with snow conditions and weather this limitation has severely limited options for quality conditions in areas that present less concerns. SEABA does a great job and has a been significant benefit to the Haines economy during a part of the year when there is not much outside money coming into the community. I strongly support option G and look forward to the positive changes this will have for an Alaskan like me to enjoy the increased options in this zone.	Thank you for your comment
HA-1-5155534	I live in Juneau, Alaska and I have guided helicopter skiing in Haines, AK since the very first tours almost 20 years ago. I'm very familiar with the local helicopter ski industry and the terrain and environment in the permitted areas. I am in favor of Alternative G. The industry needs the landings for financial [availability] and safety. I have over 600 days of guiding heliskiing in Haines and I have never had a close encounter with a mountain goat that I believe altered thie[r] behavior. A vast majority of the time we don't even see mountain goats as we are operating on the north and shady slopes where the snow quality and avalanche stability is better. The mountain goats tend to be on the south facing and slopes where there forage is more readily [available] due to a thinner snowpack that is poor quality ski conditions and more prone to avalanches.	Thank you for your comment
HA-1-515596	I support Alternative G	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-0100	We've been running outdoor recreation guided programming since 1992 on BLM lands in the Haines and Skagway areas including heli-skiing, ski mountaineering, mountaineering, climbing, camping and hiking. We are also widely permitted on BLM managed lands in other parts of the country and well versed in the permitting processes and the balanced approach within BLM's mandate to support economic activities. In the last 10 years, and as a part of the "Ring of Fire" process, economic development opportunities within BLM managed lands have been stymied due primarily to perceived stagnation of administrative processes. As a result, we feel that the balanced approach of BLM's mandate isn't being met in the Haines and Skagway area, and we'd like to see more advancement from BLM to opening and permitting these outdoor recreation activities. Given the remote nature of this terrain, and accessibility, these recreation options are limited to primarily ski plane and helicopter access. With summer tourism vibrant in the Haines and Skagway economies, the winter seasonal programming associated with heli-skiing is an important development for these communities; allowing companies to expand year round employment positions and bolstering indirect economic activity during critical spring timeframe.	Thank you for your comment.
HA-1-EM-0100	Additionally, the maps outline approved helicopter skiing areas only within the Haines Borough. There is helicopter skiing outside of the Haines Borough nearer to Skagway, which occurs on DNR lands. This isn't represented in the map. There are applications to gain access to BLM landings on these lands as well.	This plan covers all of BLM lands within the Haines Planning area. DNR lands are not part of the BLM-managed lands. Any permits for use of DNR lands would need to be submitted to the appropriate State Agency responsible for those specific lands.
HA-1-EM-0100	We would like to see the revised Ring of Fire Amendment to allow for the following: 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.	Alternative G addresses this issue.

Comment Number	Comment	Response
HA-1-EM-0100	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).	Alternatives F & G provide for increased landings in the implementation of individual Special Use Permits.
HA-1-EM-0100	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.	Alternatives F in the 2019 SDEIS eliminates the MCA after 5 years. Alternative G eliminates it entirely.
HA-1-EM-0100	These changes will allow for more economic activity by our organizations and the communities of Skagway and Haines.	Thank you for your comment.
HA-1-EM-0200	You have spent years with this plan, and every year or two keep coming back to ask for comments. I am tired of having to comment. I am tired of having to read new documents that you never finish. Your department should be embarrassed that you can not compete even a simple management plan. Here is my comment: Do not restrict use. Let helicopters, loggers, miners and other users use public land. Make them meet EPA, DEC and other such existing regulations. Other than that, let people use the land how they want!	Thank you for your comment.
HA-1-EM-0300	BLM, please consider the following comments regarding the SDEIS Haines Amendment to the Ring of Fire Resource Management Plan. I am a backcountry skier in the greater Haines area. I ski out the Tsirku, Kelsall, and other areas.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-0300	Because mountain goats are susceptible to disturbance from helicopter activity, Alternatives F and G (which greatly increase landings) could do irreparable damage and should not be considered. A demand has not been demonstrated for increased landings anyway.	The BLM is required to provide a full range of alternatives. As such alternatives A, E, F, G were developed to best meet the multiple use and sustained yield mission of the BLM.
HA-1-EM-0300	Only Alternative E will allow BLM to determine long and short term impacts to mountain goats. The final EIS should also provide impacts to wolverines and denning bears.	Thank you for your comment.
HA-1-EM-0300	Please permit specific drop-off and pick-up locations to assess impacts.	Thank you for your comment, designating landings and pickups to specified locations would be addressed in permit stipulations.
HA-1-EM-0400	The Haines Chamber of Commerce would like to voice support for BLM's Ring of Fire Resource Management Plan Alternative G. The Chamber applauds BLM for its rigorous scientific analysis on the protection of wildlife and concern for responsible recreational use in the Haines Block. The Chamber would also like to thank BLM for conducting site visits to Haines to meet with citizens and answer questions, as well as providing a gracious 90 day time period for public comment. The Chamber is in support of Alternative G because it maximizes opportunities for outdoor recreation. According to the Haines Economic Development Corporation's Economic Baseline Report composed in June 2018, over 90% of residents expressed support for winter tourism.	Thank you for your comment
HA-1-EM-0400	The Chamber believes that Alterative G will set the framework for a thriving year-round economy while upholding the value of sustainable tourism and the protection of wildlife habitat.	Thank you for your comment. The potential economic implication of each alternative is analyzed in Section 4.10.

Comment Number	Comment	Response
HA-1-EM-0500	I would like to offer my support for the decision to amend the Haines Block Management Plan to the agency preferred Alternative G management plan. Preferred Alternative G offers the most balanced management approach, allowing for appropriate environmental protections while providing the opportunity for sustainable commercial use in the western portion of the northern block. According to the Haines economic Development Corporation's Economic Baseline Report composed in June 2018, over 90% of residents expressed support for winter tourism. I believe that Alterative G will set the framework for a thriving year-round economy while upholding the value of sustainable tourism and the protection of wildlife habitat.	Thank you for your comment
HA-1-EM-0500	As Haines seeks to develop year round tourism and economic development, it is imperative that local, state, and federal land management agencies consider the needs of commercial operators to effectively operate financially viable programs which contribute to the overall revenue of local economies. The current management plan restricts commercial operation at a level which does not support operators' attempts to develop programs on BLM administered lands, especially for the purposes of winter recreation.	Both Alternative F and Alternative G increase winter and summer landings above the operator's requested amount. The potential economic implication of each alternative is analyzed in Section 4.10.
HA-1-EM-0500	One industry which has the potential to greatly benefit the winter economy of Haines is commercial skiing and heliski operations. If the current plan, which allocates a total of 300 winter landings, were expanded to allow additional landings/use the heliski industry would be allowed to significantly increase revenue which would benefit not only the BLM through collection of fees but further promote local businesses in Haines which benefit from increased tourism traffic during months which have historically seen low revenue. Alternative G allows for such an expansion while maintaining regulations and monitoring policies which protect against environment and cultural impacts.	Thank you for your comment. The potential economic implication of each alternative is analyzed in Section 4.10.

Comment Number	Comment	Response
HA-1-EM-0500	Based on stipulations within the SRP for commercial operators, the potential environment impacts of Alternative G will be well monitored and regulated by terms and conditions operators must abide by in order to maintain their SRPs. The plan takes into account the various potentials for impact on local wildlife, namely mountain goats, and provides appropriate protections from noise disturbances caused by helicopters to the most accessible goat hunting areas for local tribes.	Thank you for your comment
HA-1-EM-0500	The use of mandatory GPS logs from commercial heliski operators, as provisioned in the SRP stipulations, can be used to cross-check and validate the operators use of avoidance techniques in and around medium and high traffic areas as identified in the ADFG goat habitat survey (data released in 2017). Heliski operators have historically sought after BLM terrain that is outside the medium and high traffic areas that were identified in the ADFG goat survey.	Thank you for your comment. GPS tracking is a requirement of the permit and is addressed in permit stipulations. BLM will utilize adaptive management as we work cooperatively with ADF&G
HA-1-EM-0500	Additional considerations for the potential impacts increased helicopter activity might have on the residents of Haines have been addressed in the latest noise survey (released 2015 – Mead & Hunt) conducted within the Haines Borough at various locations near authorized heliports. The findings of this study suggest that helicopter activity in the area are within federal criteria for cumulative DNL noise levels. Borough and FAA regulations on the approved heliports and flight paths help mitigate potential disturbances towards the residents. This supports the case that increasing the allowed winter landings in the Haines block will increase revenues while maintaining a small impact on the citizens of Haines. In conclusion, I implore the BLM to accept preferred Alternative Plan G as the new management plan for the Haines Block on the basis that it will allow increased economic development with minimal impact to the environment, wildlife, and social factors of the area.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-0600	I support Alternative E 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 an RNA.	Thank you for your comment.
HA-1-EM-0600	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 highly invasive 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 and cap helicopter landings at the current levels.	The 2019 SDEIS provides for helicopter free areas within Alternatives A and E. See table 2.3. In Alternative G within the SRMA, no helicopter landings are allowed. In regard to the 1996 advisory vote, the BLM has no jurisdiction on helicopter take off and landings permitted within Haines Borough administered lands.
HA-1-EM-0600	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.	The BLM has consulted with Haines Borough, a cooperating agency as described in sections 1.8 and 5.8.
HA-1-EM-0600	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 and implied future need.	Thank you for your comment. The FEIS has been amended to reflect the NWSGC recommended winter habitat dates of November 15 and April 30. All high-use mountain goat winter habitat resulting from ADFGs 2018 RSF model has incorporated a 1500-meter buffer as is depicted in Map 9. See Section 2.2.

Comment Number	Comment	Response
HA-1-EM-0600	In addition the Northern Block is a prime candidate for wilderness designation. This option should be considered in the Alternatives. The geography of the area is unique and warrants consideration as a wilderness area. There are not many untrammeled places left in the world and this place definitely qualifies. Areas of non-motorized quiet recreation need to be designated within this planning area.	Thank you for your comment. Wilderness Area Designations were not identified as a Decision to Be Made within the Haines Amendment
HA-1-EM-0700	We appreciate BLM's effort to understand potential negative effects on wildlife in the updated May 2019 Draft RMP A/SDEIS. We also note that the SDEIS clarifies that the plan would only apply to commercial recreational use of helicopters, and not to administrative or other use of helicopters, a concern we pointed out in our scoping comments. We provide the following comments.	Limiting the use of helicopters by non commercial users was not identified as a Decision to Be Made within the Haines Amendment.
HA-1-EM-0700	*Wildlife Resources:* We have been studying mountain goat and brown bear habitat selection in the Haines area for many years. As a result, we provided the BLM with maps of important winter habitat modeled for mountain goats and denning brown bears (Maps 6, 8, and 9, Chapter 7.0) so that land managers can better understand tradeoffs among recreational and natural resources. For clarity, we will use the same habitat labels as those in the Draft RMP A/SDEIS. When we refer to "mountain goat winter habitat" or "brown bear winter habitat" this indicates areas in which our models predict that the relative probability of use by these species is high.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-0700	*Mountain Goats:* The plan states that mountain goats are the “target” species for mitigation efforts. We use The Northern Wild Sheep and Goat Council (NWSGC) as a guiding document and synopsis of the current literature describing anthropogenic impacts to mountain goats. The NWSGC recommends that helicopter activity not occur within 1,500 m of occupied/suspected nursery groups from May 1 to June 15 or important winter range from November 15 to April 30 (Côté 1996, Hurley 2004, Cadsand 2012, Côté et al. 2013). However, the stipulations in the plan do not consistently follow these recommendations. The plan prohibits landing within 1,500 m of “known” mountain goat kidding areas but offers no restrictions on flights over or around known kidding areas unless goats are “visible” (Table 2.1 and section 2.2.2 on pg. 14). The plan does not include any stipulations for “suspected” kidding areas as recommended by the NWSGC (Hurley 2004). Determining all known kidding habitat in the Planning area may not be feasible. We recommend that BLM apply the NWSGC guidelines to modeled kidding/nursery habitat predicted to have high relative probability of use (when this information becomes available for the Planning area).	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating all the recommendations of NWSGC into the current SDEIS would preclude use, such as helicopter supported recreation, from nearly the entire planning area. This preclusion of use would be in conflict with the multiple use mandate. However, information contained within the NWSGC position statement was taken into consideration and/or incorporated into analysis. In particular, a no-landing buffer distance of 1500m was applied to known mountain goat kidding areas between May 1 and June 15. The SDEIS allows for the incorporation of new or additional data, such as the kidding/nursery habitat you mentioned, should it become available. Additionally, the preferred alternative, as well as others considered, include area/areas acting as a "control" in order to facilitate future behavioral research in which commercial helicopter activity is not permitted. See section 2.2.2 and table 2.3. The FEIS has been amended to reflect the NWSGC recommended winter habitat dates of November 15 through April 30.

Comment Number	Comment	Response
HA-1-EM-0700	Although the plan prohibits landings within mountain goat winter habitat, helicopters can land immediately adjacent to and fly 500 m above ground level (AGL) over mountain goat winter habitat without restrictions. This goes against the NWSGC recommended 1,500 m minimum buffer around winter habitat (Hurley 2004). The winter timing window (Dec. 1 to Apr. 15) for stipulations that apply to winter habitat in the plan is narrower than the NWSGC recommendations, which are to avoid helicopter activity with 1,500 m from winter habitat from Nov. 15 to April 30 (Hurley 2004). The plan also allows operators to fly 500 m AGL over visible mountain goats which is only one third of the recommended minimum distance (Hurley 2004). Our estimates of sightability during aerial surveys indicate that goats can be difficult to detect in certain types of terrain and are particularly difficult to see when camouflaged by snow. Therefore, helicopters could disturb overwintering mountain goats without the pilot becoming aware. One study found that mountain goats reacted to helicopter activity up to 48 hours after the disturbance occurred even when the goats couldn't see the helicopter (Cadsand 2012), demonstrating that using visual observations of mountains goats may not be sufficient to protect this sensitive species.	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating all the recommendations of NWSGC into the current SDEIS would preclude use, such as helicopter supported recreation, from nearly the entire planning area. This preclusion of use would be in conflict with the multiple use mandate. However, the dates Dec. 1 to Apr. 15 for the winter timing stipulation are an error in the SDEIS and will be corrected to align with the timing recommendation of the NWSGC. The FEIS has been amended to reflect the NWSGC recommended winter habitat dates of November 15 and April 30.
HA-1-EM-0700	*Brown Bears:* Allowing helicopter activity near denning brown bears may have negative effects on brown bear populations. A study on Admiralty and Chichagof Islands found that bears denned between sea level and 3,904 ft. (mean 1,981 ft.) and noted that aircraft traffic may lower the suitability of brown bear denning habitat (Schoen et al. 1987). Brown bears on the Kenai denned in areas "isolated from human activity and development" which was consistent with other studies (Ciarniello et al. 2005, Elfström et al. 2008, Goldstein et al. 2010). Disturbance during the denning period can cause den abandonment which increases energy expenditure and reduces cub survival (Swenson et al. 1997, Linnell et al. 2000). Allowing helicopter landings that provide recreation access to habitats favored by denning brown bears poses a safety risk to skiers, which was demonstrated when a skier was mauled near the BLM South Block in spring of 2016.	Thank you for your comment. Analysis relative to brown bear denning in the planning are has been incorporated into the FEIS, please see Section 3.3 and 4.3. BLM looks forward to additional brown bear information when it becomes available.

Comment Number	Comment	Response
HA-1-EM-0700	The Draft RMP A/SDEIS states that conservation benefits applied to mountain goats will also benefit brown bears because there is “much overlap” between mountain goat and brown bear winter habitats (Section 1.4, pg. 9). Despite the numerous measures intended to mitigate potential effects on mountain goat populations (e.g., adaptive management, disturbance buffers, timing windows), there is very little effort to mitigate effects on brown bears in the plan. No further analysis of impacts or attempts at mitigation were conducted for brown bears. While there is some overlap of habitat used by brown bears and mountain goats in winter, these species select very different terrain, clearly evidenced in the Draft RMP A/SDEIS (Map 8, page 103). In fact, of the 421 km2 of brown bear denning habitat identified in the aerial survey area, 177 km2 (42%) are not overlapped by winter goat habitat. In particular, brown bears extensively select dens in areas where mountain goats do not use winter habitat near Porcupine, Glacier, Cahoon, McKinley, Cottonwood, Summit, and Big Boulder creeks, and Little Salmon, Tsirku, and Chilkoot rivers. In areas where brown bear and mountain goat winter habitat do not overlap, operators would be allowed the maximum authorized number of landings. Operators would also be allowed to fly over brown bear winter habitat without any restrictions. In cases where mountain goat and brown bear winter habitats overlap, no buffer is required unless the landings occur in “known mountain goat kidding areas” between May 1 and June 15 (Table 2.1, pg.14). If the operators are willing to land outside a 1,500 m buffer around mountain goat winter habitat, then they could be permitted to increase the number of allowable landings up to 5,500 in year 1 (alternative G) whether brown bear winter habitat occurs there or not.	Thank you for your comment. Analysis relative to brown bear denning in the planning area has been incorporated into the FEIS, please see Section 3.3 and 4.3. BLM looks forward to additional brown bear information when it becomes available and has great interest in working with ADFG to avoid, minimize or mitigate impacts to brown bear den sites. Please see Current Permit Stipulations at 2.2.2
HA-1-EM-0700	In 2018 ADF&G began a 5-year research project to estimate abundance, obtain population demographic information, and determine habitat preferences for brown bears in Game Management Unit (GMU) 1D. Understanding spatial movement patterns and habitat preferences of brown bears will provide insights into species habitat requirements, areas where conflicts with humans exist, and allow assessment of the vulnerability of denning bears to disturbance.	Thank you for your comment. BLM looks forward to additional brown bear information when it becomes available and has great interest in working with ADFG to avoid, minimize or mitigate impacts to brown bear den sites.

Comment Number	Comment	Response
HA-1-EM-0700	*Wolverines:* Harvest data and anecdotal reports indicate that wolverines occur in the Chilkat Valley region. Wolverines in Alaska are born between February and April. Natal dens are usually in snow caves at elevations from 984–4101 ft. (Magoun & Copeland 1998). Den abandonment after human disturbance at maternal dens has been documented (Copeland 1996). Habitat selection data from a study conducted in Berners Bay, near Juneau, indicated that wolverines selected for shrub and unvegetated habitats that were farther up slopes and covered in snow during winter (Lewis et al. 2012). Wolverines are among the most important scavengers of mountain goat overwinter mortalities in the Lynn Canal area (White et al. 2011, White, unpublished data), and in other areas where mountain goats are abundant (Lofroth et al. 2007).	Thank you for your comment. Analysis relative to wolverines in the planning area has been incorporated into the FEIS, please see Section 3.3 and 4.3.
HA-1-EM-0700	*Adaptive Management (pg. 102):* Given the known effects to goats from disturbance by helicopters, we understand BLM's rationale for using population estimates and trends and adult:kid ratios as management indicators for the collaboration with the Department on adaptive management. While it is reasonable to use population indicators under the premise that a small or shrinking population may face higher consequences from disturbance than a large or stable population, we also point out that other factors also drive population changes and these factors may be unrelated to disturbance from helicopters. BLM suggests using soft and hard triggers (in addition to other mitigation measures) allowing managers to respond to changing population dynamics. However, none of the triggers include a minimum population size. It is important to include a minimum population size (or minimum survey count) in order to minimize the risk of extirpation of small populations.	Thank you for your comment. The need for a minimum viable population estimate based upon the 10 discrete geographic regions has been identified in previous coordination with ADFG staff. BLM is in the process of establishing a funding opportunity and agreement that will enable both agencies to work toward data collection within the planning area.

Comment Number	Comment	Response
HA-1-EM-0700	Simulation results indicate that smaller populations have a higher risk of extinction than larger populations, and that harvested populations with fewer than 70 mountain goats have a greater than 50% probability of decline or eventual extirpation (White et al. 2018, White & Levi, unpublished memo). The Department recommends BLM consult with us to assess viable population size, determine trigger cutoff values, the level of precision needed to detect whether triggers are met and investigate the efficacy of these population measures as this is a new strategy for mountain goat management in Southeast Alaska. The length of time required to conduct the necessary population simulations and compute estimates can be considerable depending on availability of staff and funding.	Thank you for your comment. Information from White et al. (2018) has been incorporated in to the FEIS. The need for a minimum viable population estimate based upon the 10 discrete geographic regions has been identified in previous coordination with ADFG staff. BLM is in the process of establishing a funding opportunity and agreement that will enable both agencies to work toward data collection within the planning area.
HA-1-EM-0700	The adoption of this plan by the BLM will require a substantial time and financial commitment because the triggers have not been tested (i.e. specific trigger values have not been clearly biologically justified) and the analytical process has not been developed to calculate and assess these population measures. A flexible strategy for dealing with those scenarios should be included in the plan so these methods can be developed as the program is initiated.	Thank you for your comment. BLM is in the process of establishing a funding opportunity and agreement that will enable both agencies to work toward data collection within the planning area. Further data will help refine or further inform soft and hard triggers identified in the FEIS. The adaptive management strategy identified in sections 2.2.3 and Appendix D of the FEIS has been identified as an interim adaptive management strategy, providing flexibility to incorporate new data and best management practices as they become available.
HA-1-EM-0700	Another limitation of the adaptive management approach is that the triggers depend on aerial surveys. These surveys require adequate flying weather, pilot and staff availability, and funding resources. The number of goats observed is influenced not only by population size but also survey conditions (i.e., weather, aircraft type, etc.). In the past ADF&G has conducted minimum counts with population estimates available only from areas with collared goats that allow for the estimation of sightability. We have developed models which enable estimation of actual population size using minimum count data collected during aerial surveys (White et al. 2016).	Thank you for your comment. The adaptive management strategy identified in section 2.2.3 and appendix D allows for breaks in monitoring due to weather or other constraints. BLM is in the process of establishing an agreement that will enable both agencies to work toward data collection within the planning area. In the event an annual survey cannot be performed, a modeled population estimate may be utilized. This estimate may be similar to the way in which ADFG estimates populations in and effort to establish harvest quotas if an ariel survey was not performed. BLM will continue to work collaboratively with ADFG to establish this alternative approach.

Comment Number	Comment	Response
HA-1-EM-0700	However, this requires that resources be available to conduct the surveys. Aerial surveys have not been successfully conducted in some areas on an annual basis due to weather, funding, or other factors. Additionally, some portions of BLM land have not been prioritized for surveys because of low hunting pressure (i.e. ADF&G preferentially allocates limited aerial survey funding to areas with the highest hunting pressure). When surveys are not completed, an alternative approach should be considered.	BLM is in the process of establishing an agreement that will enable both agencies to work toward data collection within the planning area. In the event an annual survey cannot be performed, a modeled population estimate may be utilized. This estimate may be similar to the way in which ADFG estimates populations in and effort to establish harvest quotas if an ariel survey was not performed. BLM will continue to work collaboratively with ADFG to establish this alternative approach.
HA-1-EM-0700	*Current Permit Stipulations (Section 2.2.2):* The plan states that all operations "will maintain a 500-meter separation distance from…mountain goat, brown and black bears, wolves, wolverine, moose, sea lions, and other marine mammals…", but also states that operators should "maximize" the distance where possible (pg. 15). We agree with this recommendation. The plan requires pilots to maintain "a minimum separation of 500 m AGL and 500 m horizontal distance from wildlife over "near level terrain". In rolling terrain with less cliff cover, or narrow canyons, the NWSGC suggests a buffer larger than 1,500 m may be appropriate.	Thank you for your comment.
HA-1-EM-0700	The plan includes stipulations specifically for the Nourse region to help mitigate effects on mountain goat kidding areas (item number 4). It recommends that access to the Chilkat Ice Fields be through the West Creek area. It may be useful to review this recommendation as the number of mountain goats observed in the West Creek drainage has been low for several years.	Thank you for your comment. Changes are reflected in the FEIS, please see Section 2.3.2. ROPs, permit stipulations and terms and conditions will be applied at the time of permitting to avoid or minimize impacts to mountain goat kidding areas.

Comment Number	Comment	Response
HA-1-EM-0700	We note that mountain goat winter habitat occurs in proximity to Nourse Glacier. Yet, the plan does not include any stipulations specific to the Nourse region during the mountain goat overwintering period. We are pleased to note that BLM states a willingness to incorporate further stipulations as new data from mountain goat radio-collaring studies becomes available. We recommend that BLM follow the NWSGC guidelines for the Nourse region and establish a 1,500 m buffer around winter habitat between November 15 and April 30 (Hurley 2004).	All high-use mountain goat winter habitat resulting from ADFGs 2018 RSF model has incorporated a 1500-meter buffer as is depicted in Map 9. There is area between the Chilkat Glacier and the Nourse Glacier that is not within 1500-meters of high-use mountain goat winter habitat and as such landing restrictions associated with high-use winter mountain goat habitat would not apply. This area outside of the 1500-meter buffered habitat would still be subject to all appropriate ROPs, permit stipulations and terms and conditions as it relates to permitted activities. See Section 2.2. The FEIS has been amended to reflect the NWSGC recommended winter habitat dates of November 15 and April 30.

Comment Number	Comment	Response
HA-1-EM-0700	*Chapter 4.3 Wildlife:* BLM applied a 1,500 m horizontal buffer around known or projected drop-off and pick-up locations to analyze potential impacts on mountain goats. The plan notes that not all high-use winter mountain goat habitat would experience the same levels of intensity and that "nearly ¼" of recent landings in the South Block occurred in "one geographic location". If this pattern remains consistent, ultimately that "one geographic location" may receive up to 400 additional landings in year 1 (under alternative G). More intense use of specific areas may disproportionately disturb mountain goats within 1,500 m. We recommend the BLM consider a more gradual increase in the number of authorized landings than those described in alternative F and G of the plan (e.g. Table 4.3). The plan states that a 3-year period between incremental increases in activity was incorporated based on mountain goat biology after consultation with ADF&G. We agree that a lag period may help determine if a specific level of activity is influencing mountain goat populations. Based on our knowledge of mountain goat reproductive life history, a 4 or 5-year lag would be more appropriate. A longer evaluation period is necessary because mountain goats do not first reproduce in coastal Alaska until 4 or 5 years of age (White et al. 2012, 2018), and thus the effects of a given helicopter management strategy will not be fully evaluated for 4 or 5 years. Thus, if a 3-year evaluation period is used, it will not be possible to clearly determine if subsequent effects are related to a given management strategy.	Thank you for your comment. Additional analysis was included in the FEIS (see Section 4.4) and the 3-year period was amended to 4 in Alternative G (see Table 4.3)
HA-1-EM-0700	Alternative E (pg. 56) states "At this current level of use since 2014, population level effects to mountain goats have not been identified." This statement is incorrect because our studies have focused on identifying important habitat and not population impacts of helicopter use on mountain goats. Also, we have not been provided the data necessary for an impact study that identifies flight patterns, frequency, timing, and locations of landings. Thus, without such data it is not possible to clearly determine whether population level effects have occurred.	Thank you for your comment. This sentence has been updated in the final SEIS (see Section 4.3).

Comment Number	Comment	Response
HA-1-EM-0700	The plan will allow incremental increases up to 5,500 landings in summer (alternative G) if they occur at least 1,500 m away from known kidding areas. This would be a 113% increase in landings than currently authorized. BLM assumes most landings in summer will occur in the North Block and be focused on Glacial Landing Tours and be "point-to-point in nature." Therefore, BLM concludes "much of the impacts can be avoided or minimized by predetermined or predicted flight routes."	Thank you for your comment.
HA-1-EM-0700	The strategy that BLM suggests for avoiding impacts in summer (i.e. predetermined, predicted flight routes) should also be used in winter. We recommend BLM require operators to provide landing zone/ski run in formation in advance of the heli-skiing season and use that information to design flight routes to minimize helicopter activity within 1,500 m of mountain goat winter habitat (Hurley 2004).	Your comment has been incorporated into the FEIS, please see Section 4.3. Predetermined and predictable flight routes as well as pick-up and drop-off landing locations are implementation level decision that will be analyzed at the time of permit application.
HA-1-EM-0700	The number of winter landings in the plan varies considerably among alternatives. For example, alterative E would continue to authorize up to 300 winter landings in the South Block (the same number that has been authorized since 2014). In contrast, alternative G (BLM's preferred alternative) would authorize up to 1,600 landings (a 433% increase) in year 1 and up to 5,500 landings (a 1,733% increase) in year 9. The plan states that most of these landings would occur in the South Block and BLM estimates that (under alternative G) a total of 26,174 acres of mountain goat winter habitat (62% of all winter habitat in the Takhinsha region) will be affected. In addition, they predict that in the North Block, if all mountain goat winter habitat in the Chilkoot-Ferebee regions (including Haines Borough approved areas) is impacted, then 11,840 acres or 17% of mountain goat winter habitat will be affected (alternative G). With the percentage and rate of increase in landings of the preferred alternative G, it will be difficult to document mountain goat impacts so that any negative impacts can be assessed, and mitigation implemented in time to preserve a healthy mountain goat population.	Thank you for your comment. In the FEIS the 3-year period was amended to 4 in Alternative G (see Table 4.3).

Comment Number	Comment	Response
HA-1-EM-0700	Section 4.5 (pg. 62) states that helicopters have "no effect on the landscape, result in no ground disturbing activities…". Helicopters and skiers can cause avalanches inadvertently and intentionally. Avalanches have the potential to kill or injure wildlife and remove trees changing habitat in the avalanche path. Avalanches are a common cause of mortality among radio collared mountain goats in the Haines area with 45% of all mortalities being caused by avalanches (White, unpublished data). Brown bear mortality due to avalanche has also been documented in Alaska (Hilderbrand et al. 2000).	Thank you for your comment, while helicopters or skiers may cause or trigger avalanches their is little to no science that provides for a ratio of human versus natural avalanches and the amount or intensity of effects associated with each. The vast majority of lands in the Haines management area where permitted helicopter operations occur are **steep, mountainous terrain**, void of trees, and a**valanches are a common occurrence. Avalanches, whether human caused or naturally occurring have no effect on a lands with wilderness characteristics as described in 4.5.**
HA-1-EM-0700	*Wildlife Resources Conclusions and Recommendations:* Increases in helicopter activity within 1,500 m of mountain goats and in proximity to important habitat may have proportional cumulative effects of disturbance. Alternatives A and E do not increase helicopter activity beyond past use, therefore potential impacts to wildlife disturbance would not change. Because establishing an ERMA authorizes the most helicopter activity, those areas have the most potential to negatively affect wildlife. For example, the ERMAs within alternatives F (317,096 acres) and G (251,629 acres) each allow a significant increase in helicopter activity during both summer (Table 4.1) and winter (Table 4.2), potentially having a negative effect on wildlife populations through increases in disturbance. Given that aerial survey data has not been consistently collected on some BLM land and helicopter flight/landing data has not been provided to ADF&G, it may be prudent to consider a more gradual increase in helicopter activity. This would allow more time to assess the effects of increases in activity and the planned mitigation measures.	Thank you for your comment. In the FEIS the 3-year period was amended to 4 in Alternative G (see Table 4.3). This 4-year period better aligns with the age at first reproduction for mountain goats and better enables BLM to assess the effects of increases in activity.

Comment Number	Comment	Response
HA-1-EM-0700	Helicopter and fixed-wing aircraft are both excluded in the North Block within the MCA (alternatives A and F). Having an exclusion zone is important and will assist in analyzing the effects of helicopter activity on wildlife. Alternative F would retain the MCA for only a 5-year period and would not allow enough time to assess the effects of incremental increases which continue for 9 years with the greatest impacts to goat populations expected to occur near the end of the 9 years when the largest number of landings would occur. Alternative G creates a SRMA (65,467 acres) in the North Block, which would exclude helicopter use but not fixed-wing aircraft, and is smaller in size than the MCA (98,004 acres). The SRMA for Alternative G would provide long-term exclusion of helicopter-assisted recreation. This would eliminate that source of disturbance on mountain goats and other wildlife. However, the stipulations for the SRMA are not identical to the MCA (fixed-wing landings would be allowed). Alternative F would include an MCA for a period of 5 years. Maintaining the existing MCA shown in alternative A with the same stipulations at least through the period necessary to investigate the impacts of increasing helicopter use would provide consistency for use as a control to assess effects of increasing activity on mountain goats and other wildlife. Alternative E includes an ACEC (77,797 acres), which excludes all motorized or mechanized use. The objective of the ACEC would be to serve as a “wildlife refugia” (pages 21, 83, 88), recognizing the unique genetic characteristics of mountain goats in the area (Shafer et al. 2012, Shafer 2013), and could also be used as an MCA. Although smaller than the MCA, it is 12,330 acres larger than the SRMA. Because it eliminates motorized activity, the ACEC has the least potential for disturbing wildlife of all the land management types offered in the Draft RMP A/SDEIS.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-0700	Overall, helicopter landings are indiscriminately assigned to large blocks of the landscape and may allow for highly concentrated use of specific areas. A more appropriate strategy would involve cross-referencing mapped wildlife habitat with helicopter skiing areas at a finer spatial scale in order to ensure that spatial overlap of areas is minimized and that landing intensities are appropriate for given areas. Such an approach would provide a strategy for minimizing conflicts while simultaneously optimizing the multiple use needs of the landscape.	All special recreation permits are subject to an individual NEPA process. During this process, based on internal comment or public comment, the BLM will have the opportunity to consider new information and mitigate potential negative effects to wildlife within an operating area.
HA-1-EM-0700	BLM recognizes that ADF&G mountain goat research is ongoing, and the plan states that new information will be considered and applied to permit conditions as needed. We think this flexibility in the plan is important and can help mitigate potential effects on mountain goats as well as benefiting permittees. We add that ADF&G brown bear research is also ongoing and in the future information about other species may become available. We look forward to our continued collaboration with BLM and the Haines Borough. We hope that the BLM will consider and attempt to mitigate potential negative effects on all wildlife when authorizing permits in the future.	Upon completion of the FEIS, all special recreation permits are subject to an individual NEPA process. During this process, based on internal comment or public comment, the BLM will have the opportunity to consider new information and mitigate potential effects to wildlife within an operating area. BLM has great interest in working with ADFG to avoid, minimize or mitigate impacts to all wildlife, including brown bear.
HA-1-EM-0700	The plan states that as new authorizations occur on BLM land, use in some areas may shift away from land managed by the Haines Borough. It's also possible that use will remain the same or even increase on Haines Borough land in the future. Some mountain goat populations in the area utilize land managed by both the Haines Borough and the BLM (e.g. Takshanuk Range) further complicating resource management. If BLM continues to collaborate with the Haines Borough and ADF&G, this may improve efficiency of information sharing and a coordinated management strategy may benefit the operators. We appreciate the effort and outreach that went into developing the Draft RMP A/SDEIS and we thank you for the opportunity to comment.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-0700	*Recommendations:* 1. Create a 1,500 m disturbance buffer (include AGL for flights) around brown bear winter habitat and known bear den sites from November 15–June 1.	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating all the mountain goat centric recommendations of NWSGC into the current SDEIS along with a 1500 meter buffer for brown bear winter habitat would preclude use, such as helicopter supported recreation, from nearly the entire planning area. This preclusion of use would be in conflict with the multiple use mandate. Upon the completion of the FEIS, all special recreation permits are subject to an individual NEPA process. During this process, based on internal comment or public comment, the BLM will have the opportunity to consider new information and mitigate potential negative effects to wildlife within an operating area. BLM has great interest in working with ADFG to avoid, minimize or mitigate impacts to brown bear den sites.
HA-1-EM-0700	2. On page 14, Table 2.2 and Section 2.2.2 item number 1 add the words “or fly” as follows: “…not land [or fly] within 1500 meters of known kidding areas.” Adjust all other mountain goat stipulations to be consistent with the NWSGC recommendations (Hurley 2004). For example, ensure operators use a 1,500 m vertical and horizontal distance from mountain goat winter habitat per the NWSGC. Use models to determine kidding habitat with a high probability of use and apply stipulations to those areas.	Thank you for your comment, the words "or fly" and a 500 meter "minimum" vertical distance have been included in the FEIS. Please see Table 2.1 and Section 2.3.2. The FEIS has been amended to reflect the NWSGC recommended winter habitat dates of November 15 and April 30. Incorporating all the mountain goat centric recommendations of NWSGC into the current SDEIS would preclude use, such as helicopter supported recreation, from nearly the entire planning area. This preclusion of use would be in conflict with the multiple use mandate. Upon the completion of the FEIS, all special recreation permits are subject to an individual NEPA process. During this process, based on internal comment or public comment, the BLM will have the opportunity to consider new information and mitigate potential negative effects to wildlife within an operating area. BLM has great interest in working with ADFG to avoid, minimize or mitigate impacts to wildlife.

Comment Number	Comment	Response
HA-1-EM-0700	3. Adjust the time period between incremental increases in helicopter landings to at least 4 years based on mountain goat reproductive life history (White et al. 2012, 2018). This will facilitate monitoring effects on mountain goat populations. Consider a more gradual level of increase in activity levels until potential effects on wildlife can be better understood.	Thank you for your comment. In the FEIS the 3-year period was amended to 4 in Alternative G (see Table 4.3). This 4-year period better aligns with the age at first reproduction for mountain goats and better enables BLM to asses the effects of increases in activity.
HA-1-EM-0700	4. Require operators to provide ski route, landing zone, and flight path GPS data to all interested parties to facilitate understanding of potential effects on wildlife (including triggers) and other potential tradeoffs. In addition, information is needed regarding the number of landings, and intensity of use, of each specific area. Monitor all flights for compliance and work with operators to ensure stipulations are clearly understood.	Predetermined and predictable flight routes as well as pick-up and drop-off landing locations are implementation level decision that will be analyzed at the time of permit application. GPS Track logs, which include landings and pickups are currently addressed through individual permit stipulations. Monitoring of permitee landings and pick up zones on BLM administered lands occurs throughout the operating season and is subject to random spot checks and GPS data request.
HA-1-EM-0700	5. Require operators to provide desired areas of operation prior to the ski or summer tourism seasons. Require operators to follow flight paths which avoid flying within 1,500 m of winter habitat for mountain goats and brown bear denning habitat, as well as kidding areas for mountain goats where feasible.	Upon completion of the FEIS, all special recreation permits are subject to an individual NEPA process. At this time, information such as intended flight corridors, ski runs or pick-up and drop-off locations and numbers of landings will be required for analysis. These actions are subject to the ROPs, permit stipulations and terms and conditions necessary to avoid, minimize or mitigate impacts to wildlife, including mountain goats and brown bear.
HA-1-EM-0700	6. As part of the adaptive management process consult with ADF&G to conduct simulations to determine if triggers are appropriate and add an appropriate minimum population size as an important trigger.	Thank you for your comment. The need for a minimum viable population estimate based upon the Planning Areas 10 geographic regions has been identified in previous coordination with ADFG staff. BLM is in the process of establishing a funding opportunity and agreement that will enable both agencies to work toward such data collection within the planning area.

Comment Number	Comment	Response
HA-1-EM-0700	7. Maintain the current MCA and associated stipulations to allow for more consistent monitoring of potential effects. If this is not feasible consider adding the same stipulations to the SRMA (Alternative G).	Alternative A maintains the MCA under a SRMA designation. Alternative E manages the MCA as an ACEC
HA-1-EM-0700	*Fish Resources:* Although fuel storage is not described in the SDEIS, given proper fuel storage and handling procedures are followed, we do not expect any of the alternatives will impact fish resources in the Haines/Skagway Area.	Thank you for your comment.
HA-1-EM-0700	*Page Specific Comments:* 3.7 Environmental Justice, page 50, 1st paragraph, last sentence. The SDEIS reads “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).” The CSIS does have harvest data for goats for Klukwan in 1996. It looks like the reference is for DWCs goat registration hunt statistics web page and not the CSIS.	Thank you for your comment. This information was updated in Section 3.7 of the FEIS.

Comment Number	Comment	Response
HA-1-EM-0700	The number of winter landings in the plan varies considerably among alternatives. For example, alterative E would continue to authorize up to 300 winter landings in the South Block (the same number that has been authorized since 2014). In contrast, alternative G (BLM's preferred alternative) would authorize up to 1,600 landings (a 433% increase) in year 1 and up to 5,500 landings (a 1,733% increase) in year 9. The plan states that most of these landings would occur in the South Block and BLM estimates that (under alternative G) a total of 26,174 acres of mountain goat winter habitat (62% of all winter habitat in the Takhinsha region) will be affected. In addition, they predict that in the North Block, if all mountain goat winter habitat in the Chilkoot-Ferebee regions (including Haines Borough approved areas) is impacted, then 11,840 acres or 17% of mountain goat winter habitat will be affected (alternative G). With the percentage and rate of increase in landings of the preferred alternative G, it will be difficult to document mountain goat impacts so that any negative impacts can be assessed, and mitigation implemented in time to preserve a healthy mountain goat population.	Thank you for your comment. In the FEIS the 3-year monitoring period was amended to 4 in Alternative G (see Table 4.3).

Comment Number	Comment	Response
HA-1-EM-0700	*Alaska Department of Natural Resources (DNR)* With a few exceptions noted below DNR is generally supportive of BLM's efforts via this planning document to regulate helicopter access to the area. As noted in the SEIS in section 1.7 'Related Plans', the State of Alaska adopted the Haines State Forest Management Plan in August 2002 (HSFP). The State Forest was established by the legislature for the purpose of the utilization, perpetuation, conservation, and protection of the land and water, including, but not limited to, the use of the renewable and nonrenewable resources through multiple use management, and the continuation of other beneficial uses, including traditional uses and other recreational activities. Additionally, the HSFP established the Special Use Area (SUA) within the planning area to regulate commercial helicopter flights. This special use designation was proposed to establish specific areas and dates for heli-skiing operations and set standards for these operations, as well as prohibiting helicopter landings on state lands for the purpose of commercial recreational tours (such as glacier landing tours). For various reasons, the regulations pertaining to Heli Skiing operations within the SUA were not adopted and helicopter operations continue to occur under the State's generally allowed uses regulations. That said, BLM's intention to increase helicopter access and use less prescriptive management designations in the planning area is consistent with the State's management intent for these blocks of land. According to the State's Northern Southeast Area Plan, these areas should be managed for General Use, and BLM's land management direction, as indicated in this SEIS is consistent with the State's General Use designation. Whether increased helicopter traffic would be too detrimental to wildlife and habitat in the planning area, however, is a matter for the Alaska Department of Fish and Game, and we therefore defer to their expertise on these matters.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-0700	*Consolidated Agency Comments* *Areas of Critical Environmental Concern for Cultural Resources:* The BLM proposes designating an ACEC for cultural resources for mountain goats for the purpose of securing mountain goat wool for “Chilkat Blankets” or “Naaxéin,” but BLM has not justified that special management of mountain goat habitat is needed for weavers to obtain mountain goat wool. There appears to be little demand for mountain goat wool since the plan states there are few traditional weavers in Klukwan and it takes three traditional weavers approximately eight years and three mountain goats to make a blanket. We note that Rofkar (2014) reported obtaining portions of wool from seven mountain goats over 17.5 years to gather enough wool to weave one robe. Rofkar also stated that late winter is the best time to harvest wool for weaving. Currently there are no barriers to subsistence harvest of mountain goats within the area proposed for the ACEC (i.e. GMU 1D); in GMU 1D, subsistence harvest of mountain goats is by a registration hunt and not a drawing hunt, which is awarded by lottery and used for high demand hunting permits. Also, there is no local rural preference currently under federal subsistence regulations; if the harvestable surplus of mountain goats needed to be limited in the future, the subsistence hunt in GMU 1D would first be restricted to only local rural residents.	Thank you for your comment. This proposed ACEC is described in Appendix C, pages 83 through 90, where its location and rationale are analyzed, based on information obtained from consultation with Federally Recognized Tribes, a review of available literature and the application of appropriate guidance and regulation. Additional information about the importance of these specific areas to local tribes is detailed in Sections 3.5 and 3.7.

Comment Number	Comment	Response
HA-1-EM-0700	This is the current situation in nearby GMUs as mountain goat hunting under federal subsistence regulations is only allowed for local rural residents in GMU 1B and 1C, but in GMU 1D it is open to “all rural residents.” The ADF&G has primary management responsibility for the management of wildlife within the state and mountain goat populations are sustainable. It appears that the limiting factor for “Chilkat Blankets” or “Naaxéin” is not the availability of mountain goats for wool, but the availability of traditional weavers. While blanket weaving has had a recent resurgence, it appears unlikely that mountain goats will become the limiting factor within the lifetime of the RMP amendment. In any event, an ACEC would not address harvest timing or allocation issues related to weavers’ ability to obtain wool; the appropriate entities to address any such issues would be the Alaska Board of Game and the Federal Subsistence Board. Also, BLM does not explain why this specific place is important for taking goats for wool, as opposed to other areas of goat habitat. We are also concerned that a fish or wildlife species is being used as a cultural ACEC. After reviewing the BLM Manual 8100 – The Foundations for Managing Cultural Resources we did not find fish and wildlife species in the definition of cultural resource. As described in the handbook, cultural resources are concrete, “material places and things,” not fish or wildlife species:	Thank you for your comment. This proposed ACEC is described in Appendix C, pages 83 through 90, where its location and rationale are analyzed, based on information obtained from consultation with Federally Recognized Tribes, a review of available literature and the application of appropriate guidance and regulation. Additional information about the importance of these specific areas to local tribes is detailed in Sections 3.5 and 3.7.

Comment Number	Comment	Response
HA-1-EM-0700	Cultural resource or cultural property: a definite location of human activity, occupation, or use, normally greater than 50 years of age, identifiable through field inventory, historical documentation, or oral evidence. The term includes archaeological, historical, or architectural sites, structures, places, or sites or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups (cf. “traditional cultural property”). Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit described in laws, regulations, and the BLM Manuals.	Thank you for your comment. The BLM must comply with a variety of regulations and guidance including 36 CFR 800.4 (c)(1) to apply National Register Criteria to cultural properties, in consultation with SHPO and Indian tribes that attach religious and cultural importance to those properties. The National Register Bulletin, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, states that locations where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity would be considered cultural properties potentially eligible for the National Register of Historic Places. Independently of National Register status, an ACEC highlights areas, including those with cultural values, where special management attention is needed (BLM, ACEC Manual 1613).
HA-1-EM-0700	While we do not think it is appropriate to designate this area as a cultural ACEC, as noted in the above comments, we support management actions that conserve wildlife habitat. Hello Mr Lorange[r]..I am writing in support of the BLM alternative G. After attending the public meeting in Haines, I believe BLM has better oversight than the Haines Borough. I would like to offer my support for the decision to amend the Haines Block Management Plan to the agency preferred Alternative G management plan. This spring marks my 22nd consecutive season working in the heli-ski industry in Haines and we have reached a critical point of survival. The past 3 seasons have been plagued by unseasonably warm temperatures and BLM landings have helped us provide safe skiing for our clients. Without the BLM landings, the Haines heli ski industry will be in jeopardy.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-0900	Preferred Alternative G offers the most balanced management approach, allowing for appropriate environmental protections while providing the opportunity for sustainable commercial use in the western portion of the northern block. According to the Haines Economic Development Corporation's Economic Baseline Report composed in June 2018, over 90% of residents expressed support for winter tourism. I believe that Alterative G will set the framework for a thriving year-round economy while upholding the value of sustainable tourism and the protection of wildlife habitat. One industry which has the potential to greatly benefit the winter economy of Haines is commercial skiing and heliski operations. If the current plan, which allocates a total of 300 winter landings, were expanded to allow additional landings/use the heliski industry would be allowed to significantly increase revenue which would benefit not only the BLM through collection of fees but further promote local businesses in Haines which benefit from increased tourism traffic during months which have historically seen low revenue. Alternative G allows for such an expansion while maintaining regulations and monitoring policies which protect against environment and cultural impacts.	Thank you for your comment. The potential economic implication of each alternative is analyzed in Section 4.10.

Comment Number	Comment	Response
HA-1-EM-0900	Based on stipulations within the SRP for commercial operators, the potential environment impacts of Alternative G will be well monitored and regulated by terms and conditions operators must abide by in order to maintain their SRPs. The plan takes into account the various potentials for impact on local wildlife, namely mountain goats, and provides appropriate protections from noise disturbances caused by helicopters to the most accessible goat hunting areas for local tribes. Additional considerations for the potential impacts increased helicopter activity might have on the residents of Haines have been addressed in the latest noise survey (released 2015 – Mead & Hunt) conducted within the Haines Borough at various locations near authorized heliports. The findings of this study suggest that helicopter activity in the area are within federal criteria for cumulative DNL noise levels. Borough and FAA regulations on the approved heliports and flight paths help mitigate potential disturbances towards the residents. This supports the case that increasing the allowed winter landings in the Haines block will increase revenues while maintaining a small impact on the citizens of Haines. In conclusion, I implore the BLM to accept preferred Alternative Plan G as the new management plan for the Haines Block on the basis that it will allow increased economic development with minimal impact to the environment, wildlife, and social factors of the area and increase safety to our customers. The use of mandatory GPS logs from commercial heliski operators, as provisioned in the SRP stipulations, can be used to cross- check and validate the operators use of avoidance techniques in and around medium and high traffic areas as identified in the ADFG goat habitat survey (data released in 2017). Heliski operators have historically sought after BLM terrain that is outside the medium and high traffic areas that were identified in the ADFG goat survey.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1000	I would like to offer my support for the decision to amend the Haines Block Management Plan to the agency preferred Alternative G management plan. As Haines seeks to develop year round tourism and economic development, it is imperative that local, state, and federal land management agencies consider the needs of commercial operators to effectively operate financially viable programs which contribute to the overall revenue of local economies. The current management plan restricts commercial operation at a level which does not support operators' attempts to develop programs on BLM administered lands, especially for the purposes of winter recreation.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1100	Chilkoot Trail & Dyea BLM properties located along the Chilkoot Trail (Sections 2 & 34 T27 R59E) are located within the Chilkoot Trail & Dyea District NHL (see 1992 National Register of Historic Places Registration Form and map attached) and should be re-evaluated as an Area of Critical Environmental Concern (ACEC) for their nationally significant associations with the Klondike	Thank you for your comment. The BLM manages 78.97 acres of U.S. Survey 5106C and 40 acres of U.S. Survey 5109, which lay within the Chikoot Trail and Dyea District NHL. Three previous archaeological investigations along this portion of the Chilkoot Trail (Carley 1981, Gurcke 1986 and Jesperson and Pittenger 1984), did not locate and record any cultural resources on U.S.S. 5106C. A BLM archaeological survey of this parcel in August 2019, located a single 24" by 14" by 30" deep pit with no other discernible archaeological features and an unrecorded 1940's to 1950's logging camp on an adjacent private parcel. These same surveys also examined U.S.S. 5109 from adjacent private property, which determined that the steep slopes composed of moss covered granite bedrock was low in probability and inaccessible for pedestrian surveys. The single known site on these BLM managed parcels meets neither the criteria for a BLM ACEC nor as a contributing property to the NHL. The BLM would not currently recommend this site as eligible to the NRHP. Regarding its significance to the Chilkoot and Dyea District NHL, a formal evaluation would find the above pit a non-contributing property. The National Register Bulletin for National Historic Landmarks (NPS 1999) states that "A property should also be exceptionally important compared to similar properties within that theme." There is no evidence that this site would meet that standard. Additionally, the Bulletin states "a property must retain the essential physical features that enable it to convey its historical significance." Neither the pit, nor the two BLM parcels as a whole, retain any features that convey the historical significance of the NHL. Therefore, based upon this review of both ACEC and NHL guidelines, the BLM has determined that these parcels do not meet the relevance and importance criteria to be considered for designation as an ACEC. Please see BLM ACEC Manual 1613 and Appendix C in this document.

Comment Number	Comment	Response
HA-1-EM-1100	Gold Rush, exploration, settlement, and transportation with a period of significance from 1880- 1900. We disagree with the finding that there is no documentation of the historic significance of this land, as: a) the area was first listed on the National Register of Historic Places on April 14, 1975, b) the area was designated as a NHL on June 16, 1978, and c) the NHL documentation was updated on November 4, 1992. All these documents are in the public domain. We agree that cultural resource inventories are lacking for these properties. That, however, does not exclude the existence of cultural resources on the land. In fact, the likelihood of their presence is high.	Thank you for your comment. The BLM manages 78.97 acres of U.S. Survey 5106C and 40 acres of U.S. Survey 5109, which lay within the Chikoot Trail and Dyea District NHL. Three previous archaeological investigations along this portion of the Chilkoot Trail (Carley 1981, Gurcke 1986 and Jesperson and Pittenger 1984), did not locate and record any cultural resources on U.S.S. 5106C. A BLM archaeological survey of this parcel in August 2019, located a single 24" by 14" by 30" deep pit with no other discernible archaeological features and an unrecorded 1940's to 1950's logging camp on an adjacent private parcel. These same surveys also examined U.S.S. 5109 from adjacent private property, which determined that the steep slopes composed of moss covered granite bedrock was low in probability and inaccessible for pedestrian surveys. The single known site on these BLM managed parcels meets neither the criteria for a BLM ACEC nor as a contributing property to the NHL. The BLM would not currently recommend this site as eligible to the NRHP. Regarding its significance to the Chilkoot and Dyea District NHL, a formal evaluation would find the above pit a non-contributing property. The National Register Bulletin for National Historic Landmarks (NPS 1999) states that "A property should also be exceptionally important compared to similar properties within that theme." There is no evidence that this site would meet that standard. Additionally, the Bulletin states "a property must retain the essential physical features that enable it to convey its historical significance." Neither the pit, nor the two BLM parcels as a whole, retain any features that convey the historical significance of the NHL. Therefore, based upon this review of both ACEC and NHL guidelines, the BLM has determined that these parcels do not meet the relevance and importance criteria to be considered for designation as an ACEC. Please see BLM ACEC Manual 1613 and Appendix C in this document.

Comment Number	Comment	Response
HA-1-EM-1100	Only after BLM completes the required inventory work (in accordance with Section 110 of the National Historic Preservation Act) can the presence or absence of cultural resources be confirmed. Because of their inclusion in the NHL boundary, these properties have historic and cultural significance, national in scope, and are fragile, sensitive, rare, irreplaceable, exemplary, unique, vulnerable, and adverse to change. They should be managed as such and warrant an ACEC designation.	Thank you for your comment. Section 110 of the National Historic Preservation Act (16 U.S.C. 470) calls on all federal agencies to establish--in conjunction with the Secretary of the Interior--their own historic preservation programs for the identification, evaluation, and protection of historic properties. It states that an agency must provide for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110(a)(2)(A), and Sec. 112). The level of identification needed can vary depending on the nature of the property or property type, the nature of the agency's management authority, and the nature of the agency's possible effects on the property. The BLM manages 78.97 acres of U.S. Survey 5106C and 40 acres of U.S. Survey 5109, which lay within the Chikoot Trail and Dyea District NHL. Three previous archaeological investigations along this portion of the Chilkoot Trail (Carley 1981, Gurcke 1986 and Jesperson and Pittenger 1984), did not locate and record any cultural resources on U.S.S. 5106C. A BLM archaeological survey of this parcel in August 2019, located a single 24" by 14" by 30" deep pit with no other discernible archaeological features and an unrecorded 1940's to 1950's logging camp on an adjacent private parcel. These same surveys also examined U.S.S. 5109 from adjacent private property, which determined that the steep slopes composed of moss covered granite bedrock was low in probability and inaccessible for pedestrian surveys.

Comment Number	Comment	Response
HA-1-EM-1100	Continuation of Response: Only after BLM completes the required inventory work (in accordance with Section 110 of the National Historic Preservation Act) can the presence or absence of cultural resources be confirmed. Because of their inclusion in the NHL boundary, these properties have historic and cultural significance, national in scope, and are fragile, sensitive, rare, irreplaceable, exemplary, unique, vulnerable, and adverse to change. They should be managed as such and warrant an ACEC designation.	The single known site on these BLM managed parcels meets neither the criteria for a BLM ACEC nor as a contributing property to the NHL. The BLM would not currently recommend this site as eligible to the NRHP. Regarding its significance to the Chilkoot and Dyea District NHL, a formal evaluation would find the above pit a non-contributing property. The National Register Bulletin for National Historic Landmarks (NPS 1999) states that "A property should also be exceptionally important compared to similar properties within that theme." There is no evidence that this site would meet that standard. Additionally, the Bulletin states "a property must retain the essential physical features that enable it to convey its historical significance." Neither the pit, nor the two BLM parcels as a whole, retain any features that convey the historical significance of the NHL. Therefore, based upon this review of both ACEC and NHL guidelines, the BLM has determined that these parcels do not meet the relevance and importance criteria to be considered for designation as an ACEC. Please see BLM ACEC Manual 1613 and Appendix C in this document.
HA-1-EM-1100	Although Section 33 T27 R59E sits outside the boundary of the Chilkoot Trail and Dyea District NHL, it is adjacent to the district's boundary and likely contains cultural resources associated with the Klondike Gold Rush NHP. We encourage the BLM to perform cultural resource inventories on this property and to determine the eligibility of inventoried sites for listing on the National Register of Historic Places in accordance with Section 110 of the National Historic Preservation Act. We also encourage the BLM to include this parcel in the ACEC because of the high probability of extant significant cultural resources. Park staff can provide further documentation of the Dyea-Klondike Transportation Company wharf that was constructed on the shoreline of the Taiya River, across property currently managed by the BLM, during the Klondike Gold Rush (see-attached map) to assist with the BLM Section 110 inventory work.	Thank you for your comment. Section 110 of the National Historic Preservation Act (16 U.S.C. 470) calls on all federal agencies to establish--in conjunction with the Secretary of the Interior--their own historic preservation programs for the identification, evaluation, and protection of historic properties. It states that an agency must provide for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110(a)(2)(A), and Sec. 112). The level of identification needed can vary depending on the nature of the property or property type, the nature of the agency's management authority, and the nature of the agency's possible effects on the property. Please see BLM ACEC Manual 1613 and Appendix C in this document for more discussion on this proposed ACEC.

Comment Number	Comment	Response
HA-1-EM-1100	Nourse Glacier There remains a high likelihood of Gold Rush era use of the Nourse Glacier drainage (Sections 4, 5, 9, and 10 T26 R59E; Sections 7, 8, 17, 20, 29, and 32 T25 R59E). The area should be reevaluated as an ACEC as the site, accessible by foot and known for goat populations, was likely used by stampeders for hunting and exploration, and has high potential for extant historic archaeology. We disagree with the finding that a lack of documentation about archaeology in the area would preclude it from findings of "relevant" or "important" values. We encourage the BLM to perform cultural resource inventories on this property and to determine the eligibility of inventoried sites for listing on the National Register of Historic Places in accordance with Section 110 of the National Historic Preservation Act. Because of the likelihood that these properties have archeology with historic and cultural significance, national in scope, that are fragile, sensitive, rare, irreplaceable, exemplary, unique, vulnerable, and adverse to change, they warrant an ACEC designation or other similar conservation status.	Thank you for your comment. Section 110 of the National Historic Preservation Act (16 U.S.C. 470) calls on all federal agencies to establish--in conjunction with the Secretary of the Interior--their own historic preservation programs for the identification, evaluation, and protection of historic properties. It states that an agency must provide for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110(a)(2)(A), and Sec. 112). The level of identification needed can vary depending on the nature of the property or property type, the nature of the agency's management authority, and the nature of the agency's possible effects on the property. Please see BLM ACEC Manual 1613 and Appendix C in this document for more discussion on this proposed ACEC.

Comment Number	Comment	Response
HA-1-EM-1100	Geohazards BLM is determining the stability of the Nourse Lake based on a 2009 report, A Geophysical Investigation of Glacial Lake Outburst Potential of Nourse Moraine, Taiya River Watershed, Skagway, Alaska, by Denton, Lewis, and Fisk. However, on page 2 of the report, the authors acknowledge that due to various circumstances that impeded fieldwork (poor overflight conditions, time restrictions, and malfunctioning equipment), a thorough investigation of risk potential could not be completed. Based on this data from the report, the stability of the Nourse Glacier drainage (Sections 4, 5, 9, and 10 T26 R59E; Sections 7, 8, 17, 20, 29, and 32 T25 R59E) should be reevaluated. This area should be designated as an ACEC, or provided other similar conservation status, both for the potential threat to human life, safety, and property and for the potential risk to the nationally significant Chilkoot Trail and Dyea NHL cultural resources that are located downstream from the Nourse River watershed. Environmental hazards such as flooding, erosion, violent shaking, and wasting events caused by a glacial lake outburst of the Norse Moraine would cause irreparable damage to the nationally significant cultural resources within the NHL.	The BLM analyzed the Nourse Lake proposed ACEC and while it met the relevance criteria, it did not meet the importance criteria. The referenced report acknowledged the limitations of the fieldwork but concluded that the moraine was stable. See Appendix C for the full evaluation of this proposed ACEC.

Comment Number	Comment	Response
HA-1-EM-1100	Mt. Harding WILDERNESS With the exception of the no-action alternative, each of the proposed alternatives in the DEIS would significantly increase total helicopter overflights and landings in the BLM's "South Block", an area directly adjacent to designated Wilderness within Glacier Bay NPP. Under the draft plan, authorized commercial helicopter landings on BLM-managed lands could rapidly increase to 11,000 landings annually to support summer and winter recreational activities including heli-skiing, trekking/mountaineering, glacier tours, hunting, and commercial filming. Depending on flight paths, this increased commercial activity has the real potential to affect designated Wilderness and visitor experience on the NPS side of our shared boundary.	Thank you for your comment. The breakdown for helicopter operations in the south block for each alternative is listed as follows: Alternative A - 300 winter landings, Alternative E - 300 winter landings, Alternative F - up to 3000 winter landings and 3000 summer landings spread over the entire planning area, Alternative G - up to 5,500 winter landings and 5,500 summer landings spread over the entire planning area. Alternative G requires operators to demonstrate a 75% utilization rate of current allotted landings to be granted more landings. By definition a boundary is something that indicates or fixes a limit or extent creating a bounding or separating line. BLM lands within the planning area are managed significantly different than NPS lands through differing organic acts, laws, regulations, and policy. The boundary is the definitive geographical line which provides a physical location for these management differences. Buffer zones, setbacks, and effects to NPS wilderness, etc. were not further considered within the plan because 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.

Comment Number	Comment	Response
HA-1-EM-1100	By law, Glacier Bay NPP lands (and airspace to the limited degree that NPS jurisdiction allows) are managed to some of the highest conservation standards possible: • Section 4(c) of the Wilderness Act prohibits helicopter landings. Helicopter use, including overflights, is rarely permitted within the park and its designated Wilderness. This applies to non-NPS and NPS requests alike. As a result, the sight and sounds of helicopter activities are not inconsequential to park visitors and wildlife. • Section 4(c) of the Wilderness Act prohibits commercial enterprise. Commercial activities are prohibited in wilderness except under special circumstances where they demonstrate consistency with the park' s purpose and applicable management plans, park policies, and regulations. For example, commercial flight-seeing services are highly regulated and may only occur in the park under a Commercial Use Authorization. Commercial Filming and Photography may occur with a Permit when they are determined to be an appropriate use of the park with minimal impact on park resources and values. Guided commercial recreation on the ground on NPS lands adjacent to the BLM South Block boundary must be authorized and meet stringent conditions to minimize wilderness impacts.	Thank you for your comment. By definition a boundary is something that indicates or fixes a limit or extent creating a bounding or separating line. BLM lands within the planning area are managed significantly different than NPS lands through differing organic acts, laws, regulations, and policy. The boundary is the definitive geographical line which provides a physical location for these management differences. Buffer zones, setbacks, and effects to NPS wilderness, etc. were not further considered within the plan because 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

Comment Number	Comment	Response
HA-1-EM-1100	• The Federal Aviation Administration (FAA) considers National Parks as 'Noise Sensitive Areas.' Under the FAA's Circular 91-360 Visual Flight Rules, pilots are encouraged to fly at altitudes higher than the minimum permitted by regulation and on flight paths, which will reduce aircraft noise in these noise-sensitive areas. The DEIS does not describe the context and intensity of potential impacts to NPS designated Wilderness from increased helicopter use along the South Block boundary, nor does it consider the significant differences in public use and management on the NPS side of the boundary. Therefore, we request that the DEIS Preferred Alternative G to be amended as follows:	By definition a boundary is something that indicates or fixes a limit or extent creating a bounding or separating line. BLM lands within the planning area are managed significantly different than NPS lands and through differing laws, regulations, and policy. The boundary is the definitive geographical line which provides a physical location for these management differences. Defining a temporal scope for potential cumulative impacts related to helicopter operations is challenging due to varying factors affecting sight and sound disturbance to include terrain, weather, wind patterns, intensity of use in single locations, and other factors. Current and anticipated helicopter operations within the South Block lands consist primarily of heli-ski activates. 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. The BLM will provide commercial operators information supplied by the National Park Service regarding commercial operations on NPS lands. This information can be supplied to the BLM at anytime. Section 2.3.2 Current Permit Stipulations, outlines the requirement for operators to assure their operations are compliant with FAA requirements.
HA-1-EM-1100	• South Block Buffer Zone To protect the premier wilderness visitor experiences the NPS is entrusted to manage, a no fly buffer zone should be applied along the park boundary for commercial guide operators within the BLM South Block. Given the current commercial helicopter points of origin, such a buffer appears to be compatible with existing operations and the high-quality recreational opportunities associated with their activities.	By definition a boundary is something that indicates or fixes a limit or extent creating a bounding or separating line. BLM lands within the planning area are managed significantly different than NPS lands and through differing laws, regulations, and policy. The boundary is the definitive geographical line which provides a physical location for these management differences. Buffer zones, setbacks, etc. were not considered within the plan because 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

Comment Number	Comment	Response
HA-1-EM-1100	• Commercial Permit Requirements To best support park management objectives and ensure that commercial interests and helicopter operators do not extend their guiding into the park without authorization, the NPS requests the following with regard to issuance of BLM South Block permits and/or contracts: a) Inform operators of NPS boundaries, park prohibitions, and proper Glacier Bay NPP channels for requesting authorizations to conduct commercial activitie s in the park by including this information in BLM Standard Permit Stipulations. The NPS is available to help develop this material. b) Require that NPS Law Enforcement be notified within at least 24 hours in the event of any safety or emergency-related entry, landing, spill, wildlife incident, or serious issue/concern that occurred with the potential to affect park resources or visitors. c) Implement the FAA " Noise-Sensitive Areas" circular by increasing altitude when possible. Given how far helicopter noise travels, when operating in the BLM South Block, pilots should be instructed to utilize the most direct route and minimize time on the ground and/or with rotors turning and engines running.	The BLM will provide commercial operators information supplied by the National Park Service regarding commercial operations on NPS lands. This information can be supplied to the BLM at anytime. 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. By nature of the activity utilization of direct routes , minimizing time on the ground, and engine running or fuel burn is conducted in the most efficient manner by permit holders to maximize efficiencies.

Comment Number	Comment	Response
HA-1-EM-1100	1. MOUNTAIN GOATS Under the NPS Organic Act of 1916, the NPS is mandated to preserve natural resources, including mountain goats and other wildlife populations, unimpaired through long-term stewardship. Mountain goat populations occur in both Klondike Gold Rush NHP and Glacier Bay NPP. Goat populations are vulnerable to disturbance by helicopters, particularly in the winter when animals are nutritionally stressed and late spring/early summer when giving birth to young. Such disturbances may have detrimental effects on reproduction and survival of mountain goats at population levels. Researchers have found that "[m]ountain goats had a very high probability of being moderately or strongly disturbed when they were approached within 500 m by helicopters... but these probabilities were 2-5 times lesser when the approach distance was 500 m - 1500 m" (Cote, S.D., S. Hamel, A. St-Louis, and J. Mainguy. 2013. Do mountain goats habituate to helicopter disturbance? Journal of Wildlife Management 77(6): 1244 - 1248).	The Federal Land Policy and Management Act of 1976, as amended, is the Bureau of Land Management "organic act" that established the agency's multiple use mandate to serve present and future generations. Section 202 (43 USC 1712) part (c) (1) reads " In the development of and revision of land use plans, the secretary shall (1) use and observe the principles of multiple use and sustained yield set forth in this and other applicable law. Within Section 103 (43 USC 1702) the term “multiple use” means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.The term “sustained yield” means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use. Alternatives A, E, F, and G within the Haines SDEIS provide a wide range of alternatives to meet the BLM's multiple use and sustained yield mission to include consideration of an ACEC within the planning area.

Comment Number	Comment	Response
HA-1-EM-1100	Protective Buffer Zones *C) Implement the FAA " Noise-Sensitive Areas" circular by increasing altitude when possible. Given how far helicopter noise travels, when operating in the BLM South Block, pilots should be instructed to utilize the most direct route and minimize time on the ground and/or with rotors turning and engines running.*	Thank you for your comment. Section 2.3.2 *Current Permit Stipulations,* outlines the requirement for operators to assure their operations are compliant with FAA requirements.
HA-1-EM-1100	Page 9 of the DEIS states that, "effects of the proposed land use planning decisions and implementation level decisions on the Chilkoot National Historic Trail" were issues considered but dismissed because, " possible effects to users of the trail will be eliminated through adoption of a 1,500-meter buffer stipulated for BLM permitted activities pertaining to flight paths around the Chilkoot Trail." Based on Chapter 7, Map 9: Mountain Goat Winter Habitat, plus I 500 meter Buffer Zone (erroneously cited as Map 10 in Section 2.2.2), it appears that a 1,500-meter buffer around the Chilkoot Trail and a 1,500-meter buffer around mountain goat habitat would eliminate helicopter operations in the Taiya River valley from May 1 - June 15. We support the 1,500-meter buffers as a way to protect the mountain goat population in the area, which we enumerated to be larger than is estimated in the Ring of Fire planning document. We request a map showing the boundary of the Chilkoot Trail 1,500-meter horizontal buffer; clarification on the vertical distance requirements for this boundary; and the type of flight operations limited within the designated buffer. Additionally, we recommend use limitations within this buffer be extended through September 30, at a minimum, to better align with the recreational use season on the Chilkoot Trail.	Thank you for your comment. Map 11, "Chilkoot Trail plus 1500 meter buffer zone" has been added to Section 7.0 of the FEIS. A 1500 meter horizontal and vertical buffer to the trail will be stipulated for permitted activities between May 1 and September 30. See Section 1.4. Flights within the Taiya River valley will need to comply with all applicable ROPs, Stipulations, and terms and conditions of the permit..

Comment Number	Comment	Response
HA-1-EM-1100	*Glacier Bay NPP* The DEIS does not describe the context and intensity of potential impacts to mountain goat populations from increased helicopter along the South Block boundary, nor does it consider NPS legal mandates with regard to resource protection on the Glacier Bay NPP side of the boundary. We request that the DEIS Preferred Alternative G to be amended as follows:	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating the NWSGC recommended 1500-meter buffer and no-fly zone around prime winter mountain goat habitat would preclude use, such as helicopter supported recreation, from the vast majority of the BLM South Block. This preclusion of use would be in conflict with the multiple use mandate. However, information contained within the NWSGC position statement was taken into consideration and/or incorporated into analysis. In particular, the following were applied: no-landing buffer distance of 1500-meter was applied to known mountain goat kidding areas between May 1 and June 15 (language has been amended in the FEIS to state "will not land or fly within 1500-meter of known mountain goat kidding areas"); helicopters used in support of permitted recreation activities will not land within high-use winter habitat between December 1 and April 15 (dates have been amended in FSDEIS to November 15 and December 30) and will maintain a 500-meter minimum aboveground level (AGL) altitude above habitats mapped as high-use.

Comment Number	Comment	Response
HA-1-EM-1101	• Mountain Goat Population Protections a) Institute a 1,500-meter buffer and no-fly zone around the prime winter mountain goat habitat in the BLM South Block. Based on scientific evidence, the Northern Wild Sheep and Goat Council recommends helicopters maintain a minimum of 1500-meter horizontal AND vertical distance from mountain goats to minimize disturbance and displacement (Hurley K. 2004. NSWGC position statement on helicopter-supported recreation and mountain goats. Proceedings of the 14th Biennial Symposium, Northwestern Wild Sheep and Goat Council, May 15-22, 2004, Inside Passage, Alaska. 5pp.).	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating the NWSGC recommended 1500-meter buffer and no-fly zone around prime winter mountain goat habitat would preclude use, such as helicopter supported recreation, from the vast majority of the BLM South Block. This preclusion of use would be in conflict with the multiple use mandate. However, information contained within the NWSGC position statement was taken into consideration and/or incorporated into analysis. In particular, the following were applied: no-landing buffer distance of 1500-meter was applied to known mountain goat kidding areas between May 1 and June 15 (language was amended in the FEIS to state "will not land or fly within 1500-meter of known mountain goat kidding areas"); helicopters used in support of permitted recreation activities will not land within high-use winter habitat between December 1 and April 15 (dates amended in FEIS to November 15 and December 30) and will maintain a 500-meter minimum aboveground level (AGL) altitude above habitats mapped as high-use. Please see Table 2.1 and Section 2.3.2.
HA-1-EM-1100	• Commercial Permit Requirements a) Provide any visible mountain goats with a minimum 1,500-meter wide berth, especially during high snow-pack conditions, to avoid disturbances and fleeing, and to reduce the risks of falling and death.	Thank you for your comment. The FEIS incorporates a buffer for visible mountain goats, requiring a buffer of 500-meter minimum vertical and 1500-meter horizontal distance. See section 2.3.
HA-1-EM-1100	b) To better allow NPS biologists to understand helicopter use numbers and their possible effect on mountain goat populations, NPS would appreciate an annual summary of permitted helicopter activities in the South Block area.	Thank you for your comment. Annual summary numbers are available upon request
HA-1-EM-1100	The BLM and NPS share populations of wildlife along our common border, and we will continue to take an active interest in monitoring these populations and sharing any concerns related to impacts.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1100	1. COMMENT ATTRIBUTION Page 7 of Appendix A: BLM Ring of Fire Resource Management Plan Amendment Public Comments erroneously attributes three comments to Klondike Gold Rush NHP employee Anne Matsov. We request that the public record be corrected and the final three in the table (two regarding Recreation; one regarding MCA/Recreation) be cited to the correct source.	Thank you for your comment. The administrative record will be corrected.
HA-1-EM-1100	Thank you again for the opportunity to comment on this important document. Please feel free to contact NPS Alaska Region External Review Coordinator Linda Hasselbach (linda_hasselbach@nps.gov or 509-341-9198) with follow-up questions or for more information.	Thank you for your comments.
Ha-1EM-1200	The Tribal Council of the Chilkat Indian Village (CIV) request the Bureau of Land Management (BLM) to consider the comments outlined below. These comments and considerations are specific to the information and alternatives proposed by BLM in the DEIS and are meant to support in the development of a Final EIS that reflects the cultural, wildlife and recreational pursuits valued by the CIV. The Tribal Council provides comments in support of land designations, management and monitoring strategies necessary to sustain mountain goat populations and ensure equitable opportunities for recreational and cultural pursuits that have been carried out in the planning area for thousands of years. CIV organized its comments in three categories: General Comments, CIV Alternative, and CIV Considerations of BLM Proposed Alternatives.	Thank you for your comments.

Comment Number	Comment	Response
HA-1-EM-1200	ERMA designation is unsuitable for the Haines Planning Area: Based on the definition and objectives of an ERMA designation provided in the DEIS the CIV believes an ERMA is an unsuitable designation for the Haines Planning Area because the area requires the resources provided through the SRMA designation. The Tribal Council requests that the BLM consider designating all lands not set aside as an ACEC-RNA or monitoring and control area as SRMA in the final EIS. If left unchanged, the ERMA designation will fail to provide the BLM with enough resources to ensure conflict between principle recreation activities is resolved and that sensitive wildlife habitat, cultural practices and sacred sites are monitored and protected through BLM permitting process, enforcement activities, adaptive management and area planning. The wildlife in the Haines Planning Area is sensitive to human disturbances. Bears, mountain goats, and wolverines are all found within the Haines Planning Area. In order to prevent helicopter recreation from impacting sensitive wildlife habitat, cultural activities, hunting, non- motorized backcountry recreation and sacred sites BLM will need to employ resources. Studies show that managing helicopter recreation during the winter in areas of highly sensitive mountain goat habitat is complex and requires active management.1 On page 18 of the DEIS it reads that 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 values, 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, experience, and benefits.” By using an SRMA designation instead of an ERMA designation BLM will be allocated the resources necessary to manage the planning area effectively and equitably between user groups. [1] 2018 ADFG publication Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management (White and Gregovich).	Thank you for your comments. Alternative A designates 250,459 acres of lands in the North Block as an SRMA. South Block lands were not included in any SRMA boundaries for the reasons explained in section 1.4, Issues and Resources Considered but dismissed.

Comment Number	Comment	Response
HA-1-EM-1200	Principle Recreational Activities: Page 19 of the DEIS, states that ERMAs are designated to make management decision based upon the principle recreational activities. The DEIS then goes on to state several management considerations for helicopter recreation. CIV requests that for any ERMA or SRMA designation put in place BLM states that the principle recreation activities are as follows: - culturally appropriate and personal use hunting, - non motorized backcountry recreation - helicopter recreation - OHV The final plan needs to explicitly acknowledge that all of these recreational pursuits occur in the Haines Planning Area and all of these activities qualify as principle recreational activities and will require BLM resources.	Please see Appendix B Special Recreation Management Area Matrixes which further define principle recreation activities.
HA-1-EM-1200	Monitoring of helicopter recreation permits: CIV requests that the Final EIS provide more information about how BLM will monitor helicopter landings and flight path permit infractions. The DEIS states that “permitting helicopter and organizing flight excursions is primary administrative actions of BLM.” The Final EIS should explain how the BLM monitors helicopter landings and flight paths and how the agency ensures that the Required Operating Procedures (ROP) identified on page 14, Table 2.1 Comparison of ROP #16 and section 2.2.2 Current Permit Stipulations in the DEIS are being followed by permit holders.	All BLM Special Recreation Permits (SRP's) are subject to any condition or stipulation deemed necessary for the protection of public interest. An SRP authorizes special uses of the public lands and related waters and, should circumstances warrant, the permit may be modified by the BLM at any time, including modification of the amount of use. The authorized officer may suspend or terminate an SRP if necessary to protect public resources, health, safety, the environment, or because of non-compliance with permit stipulations. Monitoring of permitee landings and pick up zones on BLM administered lands occurs throughout the operating season and is subject to random spot checks and gps data request. Flight paths are maintained through operators agreement with the Haines Borough in conjunction with FAA regulations.

Comment Number	Comment	Response
HA-1-EM-1200	Monitoring, Research and Control Area: CIV feels strongly that a monitoring research and control area- that does not allow helicopter recreation, aviation recreation, and motorized recreation- needs to be maintained. Ideally this would happen through the ACEC- RNA designation. Significant agency resources have been invested monitoring the mountain goats and habitat in the Chilkat Valley. Page 6 of the DEIS states that North American mountain goats are particularly sensitive to human disturbance. The agency goes on to list a handful of scientific papers that demonstrate how goats exhibit heightened sensitivity to aerial disturbance such as helicopters and fixed wing aircraft. In the same paragraph BLM provides information on the unique genetic diversity of the goats in the Haines Planning Area. Lastly BLM states that cold adapted alpine species, such as mountain goat, are especially vulnerable to changing climates. The ACEC-RNA area identified in Alternative E is an ideal location for a monitoring, research and control area. The area offers researches the opportunity to compare goat activity outside the control area that are impacted by motorized recreation to the populations within the control area that have not been impacted. The continuation of monitoring is important to the tribe because it helps insure the longevity of the mountain goats upon which we rely for food and cultural practices. The CIV is carrying out a Tribal Adaptation Planning process to identify specific subsistence resources that will be impacted by a changing climate. A designated area for research and monitoring will attract scientist and researchers to work with the Tribe to study how a changing climate impacts sensitive habitat and mountain goat activity.	Thank you for your comment. Alternative A maintains the MCA, Alternative E creates an ACEC in place of the MCA, and Alternative G creates and SRMA that is closed to helicopter supported recreation.
HA-1-EM-1200	Plan Review and adaptive management. CIV requests that a process be included in the final EIS that describes how information from the monitoring, research, and community and Tribal member information be collected and evaluated over the life of the plan and how this information will be used to make necessary changes to the plan.	Thank you for your comment. Table 2.2 and Appendix D outline BLM's Interim Adaptive Management Strategy for permitting and monitoring. New information will be incorporated into site specific analysis at the time of permitting as the plan is implemented.

Comment Number	Comment	Response
HA-1-EM-1200	Helicopter landings: CIV does not understand BLM's rationale for the number of helicopter landings allocated in the agency's preferred Alternative G and Alternative F. In Alternative G, the DEIS states that the maximum landings authorized represents a 307% increase in landings and 1733% increase in frequency of noise. This is a dramatic increase, which does not reflect the current permit demand. The DEIS states that land conveyances to the state as well as changes in summer operations account for a significant decrease in annual landings. In addition the research BLM discusses in the DEIS shows that increased aviation activity and human disturbances negatively impact goat populations.2 BLM must provide evidence – in research and data- that shows the number of permits being proposed in alternative G and F reflect the demanded and that BLM is able to enforce permit requirements for this level of helicopter recreation activity. In addition, before allowing helicopter activity at the proposed level in these alternatives BLM needs to demonstrate that it would not have a significant negative impact upon other recreational pursuits, cultural practices, sacred sites and sensitive wildlife and habitat. 2 2018 ADFG publication Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management (White and Gregovich)	While Alternative F allows for up to 3000 winter landings and 3000 summer landings immediately, Alternative G requires operators to demonstrate a 75% utilization rate of existing authorized landings to be granted an increase.

Comment Number	Comment	Response
HA-1-EM-1200	ACEC-RNA special designation: The CIV Tribal Council would like to thank BLM for carrying out an “intensive internal review” and demonstrating that the area outlined in Alternative E does in fact meet the criteria established and defined in 43 CFR 1610. 7-2 for an ACEC designation. CIV feels an ACEC-RNA designation is warranted over an SRMA designation as considered in the agency-preferred alternative. In chapter 1.1.3-Special Designations- of the DEIS, BLM lists the relevance criteria and the importance criteria that need to be met in order to be considered an ACEC as established and defined in 43 CFR 1610. 7-2. It is clear that the area designated in Alternative E meets points 1 and 2 of the relevance criteria and points 1 and 2 of the importance criteria. Considering the wildlife, cultural resources and spiritual significance of the area and landscape of the Haines Planning Area, North Block, it is vital that a portion of this area is not impacted by recreational pursuits that utilize motorized pursuits.	Thank you for your comment
HA-1-EM-1200	Cultural Resources: In the final EIS CIV requests that BLM state the cultural significance and use of the mountain goat horns. Mountain goat horns are carved into spoons.	Thank you for your comment. A statement regarding the cultural significance of goat horns has been inserted into Section 3.5 of the FEIS.
HA-1-EM-1200	Government to Government Consultation: CIV would like to thank BLM for putting forth the effort to acknowledge the significance of the Haines Planning Area to CIV Tribal Member’s cultural and spiritual traditions. In the future, CIV asks that BLM provide the same resources and presentations to our Tribal Council and to the Village of Klukwan that the agency does for the community of Haines. The handouts, maps, and presentation offered at the Haines community meeting would have helped CIV Tribal Council and community better understand the DEIS and how best to respond.	Thank you for your comment. The BLM will continue to work toward improving consultation and communications between the BLM and CIV.

Comment Number	Comment	Response
HA-1-EM-1200	CIV ALTERNATIVE: The “CIV Alternative” is our Tribal Government’s preferred alternative. The CIV Alternative follows the categories identified by the BLM and described for alternative in the DEIS.	Thank you for your comment. Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3).
HA-1-EM-1200	**Designations and Acreages:** SRMA: The eastern portion of the North block and the South Block (239,299 Acres) designated as SRMA - Boundary lines for the SRMA North Block and South Block are the same as Alternative E in the DEIS. Lands listed as ERMA in Alternative E would be designated SRMA under the CIV Alternative. ACEC-RNA: western portion of the North Block (77,797 acres). Boundary lines for the ACEC-RNA are the same as Alternative E in the DEIS.	Alternative A designates 250,459 acres of lands in the North Block as an SRMA. South Block lands were not included in any SRMA boundaries for the reasons explained in section 1.4, Issues and Resources Considered but dismissed. Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3)
HA-1-EM-1200	**Objectives:** SRMA Objectives: - Same as the SRMA objectives listed under DEIS Alternative G, Table 2.3. - Provide for commercial recreation opportunities consisting of aviation related and special recreation permits while sustaining the health and diversity of wildlife populations. ACEC-RNA Objectives: - Same as the “ACEC Objective” listed under DEIS Alternative E, Table 2.3 - Same as the “SRMA MCA Objective” listed under DEIS Alternative A. Table 2.3 - Include, Provide for primitive hunting and recreation opportunities, such as skiing, snowboarding, snowshoeing, hiking, camping, backpacking, hunting, wildlife viewing and photography.	Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3).

Comment Number	Comment	Response
HA-1-EM-1200	**Permitted Uses and Access:** Within SRMA: - For the first 5 years or until permit demand and use reflects a need for an increase in the number of permitted helicopter landings the number of landings will be what is currently allocated and defined under Alternative A and E in the DEIS. - After five years, if there is a demonstrated need and it is demonstrated that the current helicopter recreation has not negatively impacted mountain goat habitat, expand current permit levels to allow for 600 combined total permits for south and north block in the winter and 3,000 combined total permits for south and winter block in the summer. - After 10 years BLM will use monitoring information and research to assess whether landings should remain the same, be decreased or be increased. Within ACEC-RNA: - Same as the “permitted uses and access” for ACEC-RNA under Alternative E - Include, 14 day backcountry camping permit	Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3). Alternative G requires a 75% utilization rate of permitted landings over three (4) years to trigger a permitting allocation increase, if monitoring indicates healthy goat populations and desired trends. A 14 consecutive day camping limit may be considered in implementation level planning for the ACEC-RNA.

Comment Number	Comment	Response
HA-1-EM-1200	**Other Decisions:** - Off Highway Vehicles (OHV): o Within ACEC-RNA: Same as DEIS Alternative E. o Within SRMA: Limited to existing roads and trails to be consistent with State of Alaska's Generally Allowed Uses - Visual Resource Management (VRM): IV - Minerals o No designations made in the Resource Management Plan (RMP). - Land use within ACEC-RN o ROW exclusion area o Closed to surface use or occupancy in high use winter mountain goat habitat. o Closed to permanent surface structures on Takshanuk Ridge and Klukwah Mountain for the protection of cultural and wildlife values. - Land use within SRMA o ROW considered, consistent with SRMA objectives. o Surface use or occupancy discouraged in high use winter mountain goat habitat. o Land uses permitted under the plan, such as mining access, would continue. - Administration: o Same as Alternative A.	Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3).
HA-1-EM-1200	**Recreation Management Area Designation:** - Designate a SRMA in the North and South Block where there is not an ACEC- RNA designation. - SRMA objective: Provide for hunting, backcountry recreation activities, and helicopter recreation. - ACEC-RNA objective: Protect unique wildlife and habitats, cultural activities and sacred sites. Prohibit motorized recreation. Promote research and monitoring.	Alternative A designates the entire North Block as an SRMA. South Block lands were not included in any SRMA boundaries for the reasons explained in section 1.4, Issues and Resources Considered but dismissed. Various parts of seperate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3)
HA-1-EM-1200	**Monitoring and Control Area:** - Lift MCA and replace with ACEC-RNA area proposed in Alternative E in the DEIS.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1200	- For the first 5 years or until permit demand and use reflects a need for an increase in the number of permitted helicopter landings the number of landings will be what is currently allocated and defined under Alternative A and E in the DEIS. - After five years, if there is a demonstrated need and it is demonstrated that the current helicopter recreation has not negatively impacted goat habitat, expand current permit levels to allow for 600 combined total permits for south and north block in the winter and 3,000 combined total permits for south and winter block in the summer.	Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3). The authorized officer has the discretion to choose between alternatives and select individual provisions within each alternative as part of the final ROD.
HA-1-EM-1200	- After 10 years BLM will use monitoring information and research to assess weather landings should remain the same, be decreased or be increased.	The BLM will monitor permitted uses annually. Alternative G allows that after 4 years of monitoring and 75% utilization of permits, increased landings could be authorized.
HA-1-EM-1200	- Recreation: Maximum landings are determined based on the research and monitoring information and community information collected about impacts from helicopter recreation on mountain goats, cultural resources and other backcountry pursuits.	The BLM will monitor permitted uses annually. Alternative G allows that after 4 years of monitoring and 75% utilization of permits, increased landings could be authorized. Additional impacts or issues can be incorporated into site specific analysis for permitted activities at the time of permitting.
HA-1-EM-1200	- Wildlife: Same as Alternative A. Potential impacts of noise and over flights from an incremental increase in helicopter recreation will be assessed on a five-year basis.	Impacts due to noise can be further analyzed through site specific analysis at the time of permitting and over the life of the plan.
HA-1-EM-1200	- Acoustics: unknown	Thank you for your comment
HA-1-EM-1200	- Lands with wilderness characteristics: Same as Alternative A.	Thank you for your comment. Various parts of separate alternatives that are analyzed in the draft can also be "mixed and matched" to develop a complete alternative in the final EIS. (H-1790-1 BLM NEPA Handbook, section 9.2.7.3).
HA-1-EM-1200	**Additional Considerations on Adaptive Management:** Under the CIV Alternative, after a period of 5 years BLM will engage with CIV to ensure that the management actions under the ACEC-RNA are not negatively impacting cultural practices of the CIV. Based on government to government consultation BLM will make adaptive management changes to the plan in the ACEC-RNA designated area as necessary.	The BLM will continue to consult with CIV on a Government to Government basis at CIV's request.

Comment Number	Comment	Response
HA-1-EM-1200	**CIV CONSIDERATIONS OF BLM PROPOSED ALTERNATIVES:** No action Alternative: The SRMA being managed specifically for helicopter recreation is problematic. Read general comments above #2. The current boundary, which leaves the mountain above Klukwan out of the MAC, has resulted in helicopter traffic flying over the village of Klukwan. This disrupts the cultural and wildlife uses of the culturally and spiritually significant landscape.	If Alternative A or Alternative G are selected a recreation implementation level plan will be developed at a future date. Please see section 3.2.5. This would allow for the identification of objectives, activities, experiences, and benefits developed with stakeholder input.
HA-1-EM-1200	Alternative E: - ERMA focuses all on helicopter recreation. There is very little mention other principle recreation activities- hunting, backcountry travel. See General Comments above #2. - The ERMA designation will not provide BLM with the resources to effective monitor and enforce helicopter landings, their impacts on goats, cultural resources and other recreational pursuits. See General Comments above #1.	Please see Appendix B Special Recreation Management Area Matrixes which further defines objectives, allowable use decisions, and management actions with the ERMA
HA-1-EM-1200	Alternative F: - It does not make sense to monitor for another 5 years and then make the entire area an ERMA with more landings with no mention how or if BLM will consider information from the five years of monitoring. - The number of helicopter landings being allocated is unwarranted. See General Comments above #6. - This alternative does not reflect the agency's determination that the Haines Planning Area, North Block, qualifies for an ACEC-RNA designation.	Thank you for your comment
HA-1-EM-1200	Alternative G: - Maximum landings authorized represents a 307% increase in landings and 1733% increase in frequency of noise. This is a dramatic increase. See General Comments above #6. - This alternative does not reflect the agency's determination that the Haines Planning Area, North Block, qualifies for an ACEC-RNA designation.	Permit increases would require operators to demonstrate a 75% utilization rate of previous allocated landings

Comment Number	Comment	Response
HA-1-EM-1200	Conclusion: CIV appreciates BLM considering these comments in the development of a Final EIS for the Haines Planning Area. As we stated to BLM staff during a meeting in Klukwan in July 2019: even though the authority to manage the land being considered in the DEIS has been taken from our people our Tribal Council feels a deep responsibility to protect, steward, and promote the cultural and natural resources of the Haines Planning Area. This responsibility cannot be taken away from our people and is reflected in our Tribal Government's constitution. It is our hope that the BLM continues to acknowledge the environmental and social injustices that have taken place in the Haines Planning Area and against our people and incorporates our considerations into the Final EIS	Thank you for your comment
HA-1-EM-1300	I am writing to urge you to adopt Alternative E in the SDEIS that would create an Area of Critical Concern to be managed as a Research Natural Area in order to protect mountain goats and other wildlife from the impacts of helicopter supported recreation while also freezing helicopter landing permits at current levels.	Thank you for your comment
HA-1-EM-1300	Local wildlife populations may be experiencing additional stress due to climate change and should not be subjected to increased helicopter traffic at a such a sensitive time. More analysis needs to be done regarding the interplay between and compounding effects of these stressors on wildlife populations.	Thank you for your comment. Additional analysis has been incorporated into the FEIS. Please see Section 3.3 and 4.3.
HA-1-EM-1300	Creating an Area of Critical Concern would be beneficial by allowing BLM to study short and long-term impacts to local wildlife populations while protecting them for the duration of the study period.	Thank you for your comment
HA-1-EM-1300	BLM should also specify pick-up and drop-off points in permits that would facilitate the gathering of data to assess impacts to mountain goats.	Landings and pickup zones are provided to the BLM annually. Specified locations can be addressed in permit stipulations.
HA-1-EM-1300	Consideration should be given to impacts from nearby mining exploration that includes helicopter use and may also include blasting, as well as impacts of Borough issued landing permits.	Please see section 1.5 Planning Criteria which define the sideboards or constraints related to this SDEIS

Comment Number	Comment	Response
HA-1-EM-1300	Additionally, the Final EIS should provide details regarding impacts to wolverine and denning bear populations from helicopters landing in known habitat areas.	Thank you for your comments. Impacts to brown bear denning areas and wolverines are discussed in Section 4.3 of the FEIS.
HA-1-EM-1300	If Alternative E is deemed undesirable, then Alternative A would be acceptable since it holds helicopter landings at current levels and retains the Monitoring and Control Area where landings are currently prohibited. Alternatives F and G do not represent the best options for local wildlife populations or for out-the-road residents and recreationalists such as myself. Current landing levels are tolerable but increases - whether gradual or immediate - would bring additional risks to wildlife along with unnecessary disturbance to rural residences and to non-motorized recreation. BLM should not sacrifice sound management practices in a futile attempt to insulate private business entities from the volatility of weather and climate change. Instead, decision-making and resources should be dedicated to protecting the public's wildlife resources in the face of environmental uncertainties.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1400	I would like to offer my support for the decision to amend the Haines Block Management Plan to the agency preferred Alternative G management plan. Preferred Alternative G offers the most balanced management approach, allowing for appropriate environmental protections while providing the opportunity for sustainable commercial use in the western portion of the northern block. According to the Haines Economic Development Corporation's Economic Baseline Report composed in June 2018, over 90% of residents expressed support for winter tourism. I believe that Alterative G will set the framework for a thriving year-round economy while upholding the value of sustainable tourism and the protection of wildlife habitat. As Haines seeks to develop year round tourism and economic development, it is imperative that local, state, and federal land management agencies consider the needs of commercial operators to effectively operate financially viable programs which contribute to the overall revenue of local economies. The current management plan restricts commercial operation at a level which does not support operators' attempts to develop programs on BLM administered lands, especially for the purposes of winter recreation.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1400	One industry which has the potential to greatly benefit the winter economy of Haines is commercial skiing and heliski operations. If the current plan, which allocates a total of 300 winter landings, were expanded to allow additional landings/use the heliski industry would be allowed to significantly increase revenue which would benefit not only the BLM through collection of fees but further promote local businesses in Haines which benefit from increased tourism traffic during months which have historically seen low revenue. Alternative G allows for such an expansion while maintaining regulations and monitoring policies which protect against environment and cultural impacts. Based on stipulations within the SRP for commercial operators, the potential environment impacts of Alternative G will be well monitored and regulated by terms and conditions operators must abide by in order to maintain their SRPs. The plan takes into account the various potentials for impact on local wildlife, namely mountain goats, and provides appropriate protections from noise disturbances caused by helicopters to the most accessible goat hunting areas for local tribes.	Thank you for your comment
HA-1-EM-1400	The use of mandatory GPS logs from commercial heliski operators, as provisioned in the SRP stipulations, can be used to cross- check and validate the operators use of avoidance techniques in and around medium and high traffic areas as identified in the ADFG goat habitat survey (data released in 2017). Heliski operators have historically sought after BLM terrain that is outside the medium and high traffic areas that were identified in the ADFG goat survey.	All BLM Special Recreation Permits (SRP's) are subject to any condition or stipulation deemed necessary for the protection of public interest. An SRP authorizes special uses of the public lands and related waters and, should circumstances warrant, the permit may be modified by the BLM at any time, including modification of the amount of use. The authorized officer may suspend or terminate an SRP if necessary to protect public resources, health, safety, the environment, or because of non-compliance with permit stipulations. GPS tracking is a requirement of the permit and is addressed in permit stipulations.. Monitoring will be described and implemented as part of the stipulations as well as the general terms and conditions of each Special Recreation Permit issued. Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1400	Additional considerations for the potential impacts increased helicopter activity might have on the residents of Haines have been addressed in the latest noise survey (released 2015 – Mead & Hunt) conducted within the Haines Borough at various locations near authorized heliports. The findings of this study suggest that helicopter activity in the area are within federal criteria for cumulative DNL noise levels. Borough and FAA regulations on the approved heliports and flight paths help mitigate potential disturbances towards the residents. This supports the case that increasing the allowed winter landings in the Haines block will increase revenues while maintaining a small impact on the citizens of Haines. In conclusion, I implore the BLM to accept preferred Alternative Plan G as the new management plan for the Haines Block on the basis that it will allow increased economic development with minimal impact to the environment, wildlife, and social factors of the area. As a Haines resident and ski guide, this issue is very important to me.	Thank you for your comment
HA-1-EM-1500	As President of Lynn Canal Conservation, Inc. in Haines, i have signed detailed comments on the SDEIS for the Haines Block. Following are my personal comments based on my own recreational use of BLM lands in the Haines Borough and Northern Lynn Canal. I have hiked, canoed, kayaked, and/or skiied in the following areas and plan to continue doing so: Hiteshitak Mountain, Flemer and Tahini Rivers, Mt. Raymond, Upper Chilkat River to the Canadian Border, Iron Mountain, Upper Chilkoot to Chilkat River via Assignation Creek (this route has been done by many Haines residents over the years), Halutu Ridge east of Mt. Harding on hike from Haines to Skagway (described in past editions of Chilkat Valley News). In the South Block: Peak 5386 and area north of that peak to BLM boundary.	Thank you for your comment
HA-1-EM-1500	Only alternatives A and E offer a reasonable chance to protect the solitude and recreational opportunities free from motorized intrusions that I value, as well as opportunities to observe mountain goats and other wildlife in an undisturbed location. In addition, the original Monitoring and Control Area, should be established as an ACEC to help protect the values stated above, not shrunken and placed in SRMA status.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1600	The U.S. Environmental Protection Agency has reviewed the Bureau of Land Management Draft Resource Management Plan for the Haines Amendment to the Ring of Fire Planning Area/Draft Supplemental Environmental Impact Statement in Alaska (CEQ Number 20190082, EPA Project Number 09-032-BLM). Our review was conducted in accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act, and the Council on Environmental Quality regulations for implementing NEPA. The DSEIS states that the Plan Amendment is needed to re-evaluate recreation and visitor services designations in the Planning Area to account for changes in BLM recreation policy. The action is also needed to comply with the direction in the Ring of Fire record of decision, which deferred a final determination as to the establishment of an Area of Critical Environmental Concern for the Haines Block. The deferral was in response to concerns of potential impacts from commercial and recreational activities in the area to wildlife populations; including bears and mountain goat populations. In the fall of 2017, a multi-year study of goat and bear habitat was completed, prompting the need for the DSEIS. We appreciate that the BLM developed a Draft Supplemental EIS as a result of the new information, including new alternatives for consideration.	Thank you for your comment
HA-1-EM-1600	Alternative A is maintained as the no-action alternative. The Haines Amendment to the Ring of Fire Resource Draft RMP/DSEIS presents three supplemental alternatives (Alternatives E-G) for management of the approximately 950,000 acres of ELM-administered lands in Southeast Alaska. Because the 2017 habitat study provides new information that was not available when the first three action alternatives were analyzed, the previous action alternatives analyzed in the DEIS will not be carried forward for consideration, as they no longer meet the purpose and need of the proposal. Therefore, Alternatives E-G in the DSEIS replace Alternatives B, C and D found in the Draft EIS. The BLM has stated their preferred alternative is Alternative G.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1600	Given that Alternative G proposes the most helicopter landings of any of the alternatives, a maximum of 11,000 landings annually, the EPA recommends consulting with the U.S. Fish and Wildlife Service and Alaska Department of Fish and Game, as appropriate, regarding the impacts to wildlife from this maximum amount of helicopter landings. We also recommend considering another alternative with fewer helicopter landings as the environmentally preferred alternative (Alternative E proposes 2700 landings annually; Alternative F proposes 6000 landings annually) and describing the modified or new alternative in the Final SEIS.	Both the USFWS and ADFG were consulted during the planning process (see section 5.2).
HA-1-EM-1600	Effective October 22, 2018, the EPA no longer includes ratings in our comment letters. Information about this change is explained in the Memorandum on Changes to EPA's Environmental Review Rating Process, available at https://www.epa.gov/nepa/policy-and-procedures-review-federal-actions impacting-enviromnent-under-section-309-clean-air. We provide our comments and recommendations in the enclosure. We appreciate the opportunity to review and comment on the DSEIS. If you have any questions about our review, please contact Betsy McCracken in Anchorage at (907) 271-1206 or by email at mccracken.betsy@epa.gov or you may contact me at (206) 553-1841 or nogi.jill@epa.gov.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1600	Alternatives The DSEIS contains information from studies conducted between 2012 and 2017, and therefore supplements the previous 2009 DEIS. The DSEIS presents four alternatives with varying levels of resource protection and special designations; Alternatives A (no-action alternative), E, F and G (the BLM preferred alternative). The main differences identified among the four alternatives presented in the DSEIS relate to the level of protections afforded to BLM lands. The stated need for the development of the DSEIS is because of the availability of new information from wildlife studies conducted between 2012 and 2017, including those for mountain goats and bears. One of the implementation level decisions to be made through the planning amendment process includes whether to retain the 98,004-acre Monitoring and Control Area in the northwest part of the Planning area currently used for mountain goat, bear denning and other wildlife studies. Alternatives E, F and G propose to either eliminate the currently designated MCA or eliminate it after five years from the signing of the ROD. Alternative A, the no action alternative, proposes to retain the MCA moving forward.	Thank you for your comment
HA-1-EM-1600	Regarding the new study information available, we recommend that the information be incorporated into the development of the range of alternatives and conducting an analysis of the various project alternatives' impacts to mountain goats, bears, and other sensitive wildlife and their habitat. We recommend that, in the Final SEIS, the BLM address the concerns raised through the NEPA process to date and consult with the appropriate agencies to help determine the project alternative and implementation practices that will maximize the preservation of habitat and minimize impacts to wildlife, including consideration for retaining the MCA for wildlife studies.	Thank you for your comment. The BLM will consider all new pertinent information and comments received in regards to the planning area prior to the publishing of the FEIS. Alternative A and E retain the MCA or convert it to an ACEC-RNA for wildlife studies.

Comment Number	Comment	Response
HA-1-EM-1600	Additionally, the DSEIS discloses that Alternative G is the BLM's preferred alternative. Given that Alternative G proposes the most helicopter landings of any of the alternatives, a maximum of 11,000 landings annually, and that the Plan Amendment is needed to reevaluate recreation and visitor services designations within the Planning Area as well as to comply with the ROD deferral of a final determination for the Haines Block due to wildlife impact concerns, the EPA recommends consulting with ADF&G regarding the impacts to wildlife from this alternative. We also recommend considering another alternative with fewer helicopter landings as a potential preferred alternative (Alternative E proposes 2700 landings annually and Alternative F proposes 6000 landings annually). Alternative G proposes incremental increases in permitted lands every three years (Table 2.2, page 20, SDEIS). We recommend consulting with the ADF&G to consider a relevant biological justification (e.g., for mountain goats) for the incremental increases (e.g., every 3 years) or the step increases to the number of summer and winter flights that would help the reader understand the significance of the increments.	Thank you for your comment. BLM and ADFG have worked collaboratively throughout much of the planning process. The department has also provided written comments to the SDEIS that have led to amendments within the FEIS. One amendment, in part resulting from ADFG and public comment, was lengthening the permitting period to 4-years under alternative G. This 4-year period better aligns with the age at first reproduction for mountain goats and better enables BLM to asses the effects of increases in activity. Please see Section 3.3 and 4.3.

Comment Number	Comment	Response
HA-1-EM-1600	Potential Impacts to Species The DSEIS discloses that the planning area supports critical summer and winter habitat range for mountain goats, and that mountain goats are highly sensitive to helicopter activities. In addition, the EPA recommends that the Final SEIS include a discussion of the reasonably foreseeable effects that changes in the climate may have on the proposed action and the planning area. This could help inform the development of measures to improve the resilience of the program. If projected changes could notably exacerbate the environmental impacts of the program, the EPA recommends these impacts also be considered as part of the NEPA analysis. For example, we understand that available research indicates that mountain goat mo1iality tends to be higher after a hotter summer, and this may be related to forage.1 The most nutritious forage occurs at the edge of snow patches, the early growth sprouting as snow melts, and a cooler summer protracts and extends the season for this growth. Years of less snowfall means less snow for heli-skiers as well, which could reduce the need for additional landings. We recommend that the effects of climate adaptation on mountain goats be incorporated into the Final SEIS. [1] White, K. S., A. Crupi, R. Scott and B. Seppi. 2012. Mountain goat movement patterns and populations monitoring in the Haines-Skagway area. Research progress report. Alaska Department of Fish and Game, Juneau, AK.	Thank you for your comment. Additional analysis has been incorporated into the FEIS. Please see Section 3.3 and 4.3.

Comment Number	Comment	Response
HA-1-EM-1600	Recommendations Regarding Helicopter Flights The DSEIS proposes several potential changes to existing permitted helicopter flight operations. Our recommendations related to commercial helicopter operations covered under the SDEIS include the following: • Development of helicopter/recreation exclusion zones to avoid impacts to wildlife; • Development of a minimum elevation for helicopter flights and minimum commercial operation distance from wildlife occupied sites; • Consideration of the timing of helicopter activities and helicopter flights so as not to interfere with high value wildlife habitat and life cycles; • Adaptive management over the course of implementation to reflect additional new information as it is made available; and • Consideration of a monitoring program regarding mitigation measure effectiveness and compliance.	There is a range of alternatives that analyze areas functioning as "exlusion zones" for avoiding impacts to wildlife. These include the MCA in alternatives A and F, an ACEC in alternative E and SRMA within alternative G (see Table 2.3). Additionally, measures were identified in 2.2.1 and 2.2.2 and discuss ROPs, current permit stipulations and terms and conditions that will apply to permitted activites in the planning area. These include minimum vertical and horizontal buffers from both high-use habitats as well as visible wildlife. An adaptive managment strategy is outlined in Section 2.2.3 and Appendix D. The success of this strategy is reliant upon continued monitoring in an effort to better understand impacts at identified permitted levels and identifying implementable managment actions while monitoring and evaluating their effectiveness.

Comment Number	Comment	Response
HA-1-EM-1600	Cultural Resources and Tribal Consultation The Chilkat Dancing Blanket woven from mountain goat wool and bark is an iconic art form of goat coats. The DSEIS discloses that the blankets have cultural significance throughout Southeastern Alaska's Tlingit, Haida and Tsimshian natives for their ceremonial dance use and that they are tied to clan, moiety and village identity. As information in the DSEIS indicated that there will be impacts to resources of interest to Alaskan Natives, we recommend the FSEIS include a discussion of how tribal concerns for mountain goats and bears will be addressed through management actions. We also recommend that the FSEIS include a section that describes BLM's tribal consultation policy as well as a summary of any formal government-to-government tribal consultation during the project's environmental review process and how the outcomes of consultation were factored in to the development of the FSEIS.	Tribal concerns and comments for resources were incorporated or considered in the development of Sections: 3.6 Cultural Resources, 3.7 Socio-Economics and 3.8 Environmental Justice, as well as in Alternatives E and G. Tribes that have participated in consultation must be notified of the basis for the BLM decision. The BLM must clearly explain how tribal input affected the final decision. While the BLM prefers that it address tribal concerns or resolve potential effects, this is not always possible. Where the BLM was not able to accommodate tribal desires, a clear explanation will be provided explaining why this was not possible in the Record of Decision. Because of the Government to Government relationship between Federally Recognized Tribes and the U.S. Government's agencies as well as protections for information about cultural resources under the National Historic Preservation Act's Section 304, information about sensitive cultural resources, which are obtained through tribal consultation, are with held from public disclosure. However, a summary of each Federally Recognized Tribe's own consultation notes will be made available to their tribe at their request. The BLM's tribal consultation policy is summarized in its 1780 Manual and Handbook for Tribal Relations, which is available on the internet at: https://www.blm.gov/basic/program-cultural-heritage-and-paleontology-tribal-consultation-1780-tribal-manual-and-handbook.
HA-1-EM-1700	Introduction These comments are provided to help BLM produce an FEIS that is adequate and sufficiently comprehensive to meet the requirements of the National Environmental Policy Act (NEPA). In that document we hope BLM will create and/or select a preferred alternative that better meets the issues raised. Also, there is substantial new information that needs to be included and analyzed in the FEIS. direct result of BLM issuing helicopter landing permits in mountain goat habitat.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1700	Background 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 and other wildlife 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. In 2018 LCC submitted comments on the ROF Haines Amendment. As discussed in the SDEIS, numerous scientific studies elaborate threats to mountain goat populations from human disturbance. We continue to advocate that mountain goat resources be protected from potential adverse impacts as a	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1700	The Haines Block is the only area in Southeast managed by BLM that has significant mountain goat resources, as has been documented in past comments. (Documentation provided in LCC 2004 ACEC nomination letter). 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 its specific management requirements, regardless of how other agencies manage their lands.	Thank you for your comment
HA-1-EM-1700	The Ring of Fire planning process is the only current – and possibly the only - opportunity to create and implement a management strategy that protects mountain goats from impacts of helicopters in the Planning Area. That would require retaining a control area which is essential for future research on helicopter impacts to mountain goats. The importance of necessary future research is stated in the 2018 Alaska Department of Fish and Game goat study in the Haines area by White and Gregovich, as will be discussed later in these comments.	Thank you for your comment. The FEIS preferred alterative includes an area of 65,467 acres that would in essence act as a "control" as no helicopter-supported recreation landings would be authorized. Please see Table 2.3.
HA-1-EM-1700	Summer and Winter Helicopter Landing Impacts Analysis The so-called “Haines Block” is located in two distinct governmental jurisdictions with different philosophies on helicopter tourism – the Haines Borough only allows heli-skiing while the Skagway Borough allows summer use. Haines-based LCC will offer general comments regarding summer landings originating out of Skagway, and specific comments on Haines-based flights and landings. While not specifically directed at Skagway helicopter tourism, all our comments about the health of the mountain goat resource are meant to apply to both the North and South Blocks of the Planning Area. According to new information by ADFG that we addressed in our 2018 comments, summer and winter landings require different management strategies. The SDEIS did not address this.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1700	Instead of merely stating differing amounts of summer and winter landings for each alternative, we request the FEIS do the required analysis proposed in the 2018 ADFG publication Mountain Goat Resource Selection in the Haines Skagway Area: Implications for Helicopter Skiing Management (White and Gregovich). That is, according to White and Gregovich, impacts to goats from predictable summer flight paths and a few designated low impact landing sites can be “readily mitigated”. However, helicopter skiing utilizes more flight routes and landings, where these routes and landings 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 paper concludes that regulating, managing and mitigating winter heli-skiing is “a complicated conservation problem” (White and Gregovich, page 2) as compared with “readily mitigated” summer helicopter tours. The FEIS must include a different management strategy for winter use and should not lump impacts from summer and winter in an identical analysis. Solving “the complicated conservation problem” posed by winter flights and landings, would require permit holders to furnish data of actual drop-off and pick-up points, as well as flight paths. A science-based management strategy is not possible without this information.	Differences in impacts to mountain goats during winter and summer seasons is acknowledged in section 4.3 as an assumption or declaration made for the purpose of analysis. For this reason, impacts were differentiated between winter and summer seasons under each alternative. As mentioned in your comment, and cited under "summer" impacts for alternatives E, F and G, White and Gregovich (2018) and Hurley (2004) both stated that much of the impacts can be avoided or minimized by predetermined or predicted flight routes traveling to and from relatively few designated landing locations. Upon completion of the FEIS, all special recreation permits are subject to an individual NEPA process. At this time, information such as intended flight corridors, ski runs or pick-up and drop-off locations and numbers of landings will be required for analysis. These actions are subject to the ROPs, permit stipulations and terms and conditions necessary to avoid, minimize or mitigate impacts to wildlife.

Comment Number	Comment	Response
HA-1-EM-1700	The pressing need for science-based management was articulated in a joint BLM/USFS proposal to the National Fish and Wildlife Foundation way back in 2002: “Alaska and western Canadian provinces and territories are experiencing unprecedented growth and expansion of recreation and tourism activities that require use of helicopters in formerly inaccessible areas. Management agencies lack comprehensive, science-based guidelines to manage these activities to ensure protection of populations and habitats of potentially affected species (mountain goats, grizzly bears, Dall sheep, wolverines, and wolves). Industry expansion into wildland habitats is outpacing land management agencies abilities to adequately evaluate, manage, and mitigate potential effects on behavior, physiology, habitat fidelity, and population viability and productivity. The pervasive nature of seasonal, and in some areas, year-round helicopter activities are permanent in that these high intensity and frequency activities recur annually indefinitely. This is a significant departure from traditional helicopter supported activities.” (See BLM/USFS 2002 National Fish and Wild Life Foundation grant proposal, emphasis added). Unfortunately, this proposal was not funded and seventeen years later agencies still lack the ability “to adequately evaluate, manage, and mitigate potential effects.” It is past time to implement a management strategy that will actually protect goats. Support for 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 (MCA). (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 management unit that provided helicopter recreation. Fortunately, the MCA has been retained, although Alternatives F and G will terminate it.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1700	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. As it stands the proposed ACEC area is much smaller than the MCA. (SDEIS at 6). There is no justification to remove the southerly section which has a mountain summit of 4,622 feet from the ACEC. This area has significant goat and bear habitat that will continue to serve as a baseline for wildlife studies. We recommend all of the MCA be put into the ACEC, except for any areas required by the Chilkat Indian Village to insure the integrity of their water supply.	Thank you for your comment. Alternative E has been amended to include the entire MCA. The ability to provide for the monitor and control of permitted uses on wildlife is retained under Alternative E as an ACEC, Alternative F for a period of 5 years within the Monitor and Control Area, and under Alternative G within the SRMA, which would not preclude monitor and control studies for effects on wildlife populations within the Haines Planning area.

Comment Number	Comment	Response
HA-1-EM-1700	Dr. Aaron Shafer, the biologist whose scientific papers are cited in the SDEIS, 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, emphasis added). The SDEIS affirms that Haines mountain goat resources are not only important, but also unique. These significant values must 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). The SDEIS makes the argument for why this "special management" is essential in the Planning Area: BLM has determined the proposed ACEC area contains mountain goat habitat essential to the maintenance of mountain goat diversity." (SDEIS at 5). Further, the area "provides habitat for mountain goat populations which may be fragile or sensitive to human activities, irreplaceable or unique and/or vulnerable to adverse change." (Id. at 6). It is also unique in that it is the only place in the Planning Area where helicopter landings have been prohibited to date. The willingness of BLM to allow helicopters to land everywhere is illustrated by past permit allocations and Alternatives F and G, and the inclusion of G as the preferred alternative.	Thank you for your comment Appendix C provides the analysis for all ACEC nominations.

Comment Number	Comment	Response
HA-1-EM-1700	Support for ACEC/RNA designations in FLPMA and BLM Handbook FLPMA 43 U.S.C. 1701 requires BLM to give priority to the designation and protection of ACEC's. The BLM Manual at 1613.02 mandates BLM "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. ● 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), emphasis added). 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 many other wildlife conservation advocates, it will prioritize the requested ACEC designation as mandated, and select Alternative E as the preferred alternative.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-EM-1700	● "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 – 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 from helicopter-supported recreation, except for the Monitoring and Control Area, which would be removed in 0 to 5 years under Alternatives F and G. ● 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). 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. We repeat: FLPMA requires that when developing and revising its land use plans, BLM give priority to the designation and protection of ACECs. (Id.)	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-EM-1700	RNA Designation In past submissions to BLM, LCC has 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). The current Monitoring and Control Area, is the only area in the Haines Block “where helicopter supported recreation has not occurred” (BLM 2018 handout). 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 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.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-EM-1700	This is the last opportunity for BLM to offer protection to mountain goats from ever-expanding helicopter activities. If the preferred alternative or Alternative F is chosen, this opportunity is lost forever.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.
HA-1-EM-1700	Importance of Maintaining a Monitoring and Control Area (MCA) *BLM will not be able to determine impacts caused to goats by helicopter landings if it eliminates the MCA, because there will be no control against which to measure impacts. Eliminating the MCA should be removed from consideration for any action alternative, unless the area becomes an ACEC/RNA. Created in 2002 at 112,790 acres and then reduced to 98,000 acres at state conveyance, there is no real reason to further shrink it to 77,797 acres as proposed, should it become an ACEC (SDEIS at iv.) In order to increase the number of landings in high-use goat habitat, BLM will monitor for "healthy" populations, in order to increase landings (Id.) Without a control area to compare whether natural populations are stable, increasing, or decreasing, BLM will not know if population fluctuations are attributable to helicopter landings or other factors such as large snowfalls or climate change.* In fact, the MCA was created "with the intention of providing a source of consistent monitoring data if adaptive management changes become necessary." (SDEIS at 33) Since all action alternatives rely on adaptive management, removing the MCA makes adaptive management impossible. The SDEIS admits this: Alternative F would abolish MCA in 5 years and "the ability to quantify long-term helicopter related impacts to wildlife would no longer exist within the Planning Area." (p. 59)	Removal of the MCA does not make adaptive management impossible as adaptive management metrics are most appropriately applied at the geographic region rather than the entire planning area. Although the MCA would allow for scientific studies to quantify effects to wildlife resulting from permitted helicopter activities, changes in metrics such as population and kid:adult ratios could be influenced by environmental factors not associated with helicopter activities.

Comment Number	Comment	Response
HA-1-EM-1700	The 2012 DEIS makes an excellent case for retaining the Monitoring and Control area: “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). Alternatives F and G 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.) BLM 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). This exact sentence occurs in the 2019 SDEIS (at 38). It is past time to do something about this admitted ignorance. It is absolutely essential to retain the Monitoring and Control area so that future research can answer these questions.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1700	Actual assessments of impacts to goats were required both 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 more than 30 years later.	Thank you for your comment.
HA-1-EM-1700	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.	Thank you for your comment. Alternative E has been amended to include the entire MCA. The ability to provide for the monitor and control of permitted uses on wildlife is retained under Alternative E as an ACEC, Alternative F for a period of 5 years within the Monitor and Control Area, and under Alternative G within the SRMA, which would not preclude monitor and control studies for effects on wildlife populations within the Haines Planning area.
HA-1-EM-1700	Specifically, the Record of Decision for the 1995 EA "required a monitoring program to establish a baseline inventory of goats in both permit areas and comparable non-permit areas as a starting point to monitor long- and short-term responses by goat populations." (SDEIS at 40). Then new helicopter landing permits "reduced markedly the control areas selected to compare unexposed goat populations to the glacier landing activities, in 2002 it became necessary to create a monitoring control area where authorized helicopter-supported commercial recreation was not allowed in order to maintain sufficient control areas to make statistical and direct comparison of impacts." Yet in 2019, "little is currently known of the specific short- or long-term population trends of mountain goats in the Planning Area." (SDEIS at 38). Due to a growing heli tourism industry, "concern for potential effects to mountain goats" has increased. (Id at 38).	Thank you for your comment. Alternative E has been amended to include the entire MCA. The ability to provide for the monitor and control of permitted uses on wildlife is retained under Alternative E as an ACEC, Alternative F for a period of 5 years within the Monitor and Control Area, and under Alternative G within the SRMA, which would not preclude monitor and control studies for effects on wildlife populations within the Haines Planning area. Adaptive Management strategies outlined in Section 2.2.3 and Appendix D provide hard and soft triggers that allow management to adapt permitting as monitoring occurs and more information becomes available.

Comment Number	Comment	Response
HA-1-EM-1700	Eliminating the Monitoring and Control Area would make assessment of impacts - as required by the 1995 ROD and subsequent IBLA decision (IBLA 95-496) and still not done - impossible. BLM monitoring stopped in 2006 (SDEIS at 39) but the SDEIS fails to mention this data has been analyzed and is ready for publication, (July 16, 2019 conversation with Jennifer Larsen) insuring the level of ignorance regarding impacts to goats will continue. We request that this analysis be provided in the FEIS, as this analysis measures impacts to goats in the Planning Area.	The FEIS preferred alterative includes an area of 65,467 acres that would continue to act as a "control" as no helicopter-supported recreation landings would be authorized. Please see Table 2.3. A data sharing agreement was initiated in September, 2018 with Green Mountain College in an effort to compile and analyze mountain goat data collected by BLM between 1995 and 2006. Materials associated with said data were in draft at the time of the SDEIS release for public comment. A thesis was completed and provided to BLM in June, 2019. Information contained within the thesis has been incorporated into the FEIS, see Section 3.3.
HA-1-EM-1700	We cannot stress enough the importance of retaining the last non-impacted area as a control for study, and beginning the study as soon as possible. BLM and USFS have been issuing helicopter landing permits since 1985. More than thirty years later there is still minimal knowledge of actual impacts: “Little is currently known of the specific short or long term population stability, seasonal habitat fidelity, and physiological or behavioral impacts on mountain goats and wildlife species from aircraft. the proposed area to disturbance are not well known.” (See BLM 2002 EA at 11 and 12). Considering current levels of helicopter tourism, anticipated future increases, and the known susceptibility of goats to human disturbance, this level of ignorance is unacceptable and must not continue. How many landings can goats tolerate before population decreases occur? What mitigation would be effective? What is the difference in impacts between summer and winter landings? Is it better to consolidate impacts or spread them out?	The FEIS preferred alterative includes an area of 65,467 acres that would continue to act as a "control" as no helicopter-supported recreation landings would be authorized. Please see Table 2.3. The number of landings mountain goats can tolerate before population decreases occur is not known thus the reason to employ an adaptive management strategy. Monitoring metrics such as population estimates, population trends, and kid:adult ratios and identifying when a pre-determined threshold has been met enables the agency to act accordingly.Mitigation measures such as the following would be utilized: redistribution of permitted use (temporal and/or spatial), avoidance or exclusion zones, restrictions in duration and/or frequency, reduction in permitted landing allocations. Differences between summer and winter impacts can be seen in Section 4.3 under "Impacts to mountain goats and their habitat."
HA-1-EM-1700	While BLM recognizes that impacts to goats are occurring as a result of issuing helicopter landing permits in goat habitat, BLM has no idea of the magnitude of impact. (See PRMP/FEIS at 4-151). In order to conduct such a study, the existing Monitoring and Control Area needs to remain protected so that there is a natural, non-impacted area against which to measure impacts. RNAs are areas where “research and monitoring are encouraged” and are created precisely to serve as a “baseline” for long-term change. (Id at 3-186).	Thank you for your comment. Alternative E has been amended to include the entire MCA. The ability to provide for the monitor and control of permitted uses on wildlife is retained under Alternative E as an ACEC, Alternative F for a period of 5 years within the Monitor and Control Area, and under Alternative G within the SRMA, which would not preclude monitor and control studies for effects on wildlife populations within the Haines Planning area.

Comment Number	Comment	Response
HA-1-EM-1700	Goat Regions The SDEIS sometimes claims there are 9 genetically distinct goat populations in the Planning Area (at 21) and sometimes claims there are 10 (at 36). The FEIS needs to clarify the correct number. The FEIS should address whether it is better for goat populations to concentrate or disperse impacts from helicopter supported recreation. The FEIS should analyze what a “significant” increase in landings in high use habitat will do to these regional goat populations, particularly in instances where 100% of high use habitat will be affected. Also the FEIS should address the benefits of regulating specific ski runs rather than broad areas of use, as is done in British Columbia. Considering that these 9 or 10 regions are genetically distinct (Shafer research), what are the impacts of losing 1 or more of these populations?	Thank you for your comment. Page 21 of the SDEIS stated "Area includes 4 of 9 Haines area mountain goat populations..." in error. The sentence will be amended in the FEIS to read "Area includes mountain goat populations from 4 of 10 discrete geographic regions within the planning area and all 3 mountain goat wintering strategies." The SDEIS references geographic regions as being discrete (see page 36 of SDEIS) rather than mountain goat populations. The effects to populations should they experience less intense activities across a broader landscape versus more intense activities within a localized area are not fully understood. The incorporation of the adaptive management strategy, as outlined in Section 2.2.3 and Appendix D, coupled with additional site specific requirements at the time of permitting, would allow BLM to quantify impacts should they exist at the permitted allocation. No permitted landings are to occur in high-use habitats as ROP # 16 prohibits the landing of helicopters (used in support of recreation) in all high-use habitats (see section 2.2.1). Analyzing direct impacts to mountain goats resulting from a "significant" increase in landings 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. The incorporation of the adaptive management strategy, where specific metrics such as population estimates and kid:adult ratios are monitored, coupled with additional site specific requirements at the time of permitting, would allow BLM to quantify impacts should they exist at the permitted allocation. Analyzing impacts on a specific ski run basis, as mentioned, is most appropriate at the implementation lever or at the time of permitting. The need for a minimum viable population estimate based upon the 10 discrete geographic regions has been identified in previous coordination with ADFG staff. BLM is in the process of establishing a funding opportunity and agreement that will enable both agencies to work toward data collection within the planning area.

Comment Number	Comment	Response
HA-1-EM-1700	"Buffered" High-use Habitat Alternatives F and G allow alarming amounts of landings in high use habitat. Alternative F allows landings in 250 different high use habitat locations or 100% of high use habitat on Takhinsha (SDEIS at 57). Alternative F would remove 29,465 acres of high use habitat from MCA (Id at 59). These increases are considered "significant", yet no data is provided that the proposed mitigation will be effective in the event where a majority to all of the high use habitat is impacted. We will discuss the problems with the proposed Adaptive Management later.	No permitted landings are to occur in high-use habitats as ROP # 16 prohibits the landing of helicopters (used in support of recreation) in all high-use habitats (see section 2.2.1). Alternative F does not allow, but rather projected, 250 landing locations for analysis purposes. All special recreation permits are subject to an individual NEPA process. At this time, landing locations would be analyzed in further detail. During this process, based on internal comment and/or public comment, the BLM will have the opportunity to consider new infomration in an effort to avoid, minimize or mitigate potential negative effects to wildlife within an operating area.
HA-1-EM-1700	Excessive Number of Landings Both Alternatives F and G allow for "a significant increase" in landings (SDEIS at v) with F allowing a tenfold increase and G significantly more – although the exact number is unclear. Yet there has been "a significant decrease in annual landings on BLM-managed lands in recent years." (Id at 7). The only logical premise for "significantly" increasing landings is that there are operators needing to use them. However, the data provided in the SDEIS shows that demand continues to decrease, from a high of 380 winter landings in 2002, with an average use of only 77. Similarly, summer landings have decreased from a high of 4102 in 1998 to a low of 78 in 2016. (Table 3.1, page 32). Therefore, there is no rationale for Alternatives F and G allowing such large increases, when current landings are more than adequate to meet demand.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.

Comment Number	Comment	Response
HA-1-EM-1700	While the SDEIS states the Haines Borough also allows 2600 user days, or the equivalent of 5200 landings (Id. at 13), the SDEIS fails to provide the actual number of landings used. In fact, 2600 skier days have never been used and the amount of actual use has been significantly less than the allotment with the exception of 2010, where the allotment was exceeded by a mere 11 skier days. Even with the big boost from two years of Freeride competition in Haines in 2016 and 2017, approximately 1000 skier days went unused in each of these years. After the Freeride events, actual use fell to 975 and 541 days in 2018 and 2019 respectively. (https://www.hainesalaska.gov/sites/default/files/fileattachments/administration/pa ge/21111/season-end_report.pdf) These years of continued unused skier days indicate the “demand” is simply not there. The notion that heliski operators requested additional landings “to enhance or grow their operations” (SDEIS at 7) is shown to be without merit when one actually looks at the available data. Therefore, there is absolutely no rationale for alternatives F and G to allow for “significant” increases in landings. BLM makes the erroneous “planning assumption” that “winter demand for permitted helicopter landings. . .is likely to increase over the life of the plan.” (Id. At 51). This erroneous assumption should be removed from the FEIS. Actual data provided in the SDEIS and on the above referenced Haines Borough website show a consistent downward trend in both summer and winter use. This data shows that existing allotment has yet to be met once since permits for summer use were first issued in 1993, that winter use was greatest more than a decade ago -from 2002 to 2005, and that summer use was greatest more than two decades ago – from 1993 to 2000. (Id. at 32)	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.

Comment Number	Comment	Response
HA-1-EM-1700	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 at 4). Table 3.1 shows that allotted landings already significantly exceed demand (2019 SDEIS at 32) and therefore there is no rationale to increase landings, only a rationale to provide alternatives that maintain or decrease landings. 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 at 4), rather than the narrow focus on unrealistic industry requests. The preferred alternative uses a 75% threshold of use over a 3-year period in order to increase landings (SDEIS at 20). Using this same threshold tool would mean 222 winter landings would need to happen to justify an increase over current allotment. However, since winter landings have been re-authorized, that threshold has only been met once. (Id. At 32). And that 75% threshold of allotment was never met from 1999 to 2005. (Id.) Only Alternatives A and E address purpose and need. In fact, based on past use trends, Alternatives A and E which each allow 300 landings would allow operators to expand their current use, showing the conclusion of the SDEIS at page 51 to be in error. Please make all of these corrections in the FEIS, and select a preferred alternative that is logically justifiable and address the “protect natural resources” part of purpose and need.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.
HA-1-EM-1700	Only Alternatives A and E address purpose and need. In fact, based on past use trends, Alternatives A and E which each allow 300 landings would allow operators to expand their current use, showing the conclusion of the SDEIS at page 51 to be in error. Please make all of these corrections in the FEIS, and select a preferred alternative that is logically justifiable and address the “protect natural resources” part of purpose and need.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.

Comment Number	Comment	Response
HA-1-EM-1700	Improve Monitoring and Data Collection The previously cited White and Gregovich 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 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). 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.” (White, Page 20, emphasis added). While the SDEIS acknowledges this problem: “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,” (at 57) it does require operators to provide this information. This is a major failing. 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” to actually determine where impacts are occurring and what those impacts are.	Upon completion of the FEIS, all special recreation permits are subject to an individual NEPA process. At this time, information such as intended flight corridors, ski runs or pick-up and drop-off locations and numbers of landings will be required for analysis.

Comment Number	Comment	Response
HA-1-EM-1700	Adaptive Management (AM) As we have stated previously, removing the MCA will make it impossible to identify if any documented negative effects on goat populations can be attributed to helicopter landings or other causes. Therefore, it will be impossible to document goat health concerns needed to implement restrictions (SDEIS at 23). Further, reduced use should not be the last priority (Id.) but the first.	Removal of the MCA does not make adaptive management impossible as adaptive management metrics are most appropriately applied at the geographic region rather than the entire planning area. Although the MCA would allow for scientific studies to quantify effects to wildlife resulting from permitted helicopter activities, changes in metrics such as population and kid:adult ratios could be influence by environmental factors not associated with helicopter activities. Additionally, the FEIS preferred alterative includes an area of 65,467 acres that would in essence act as a "control" as no helicopter-supported recreation landings would be authorized. Please see Table 2.3.
HA-1-EM-1700	The AM strategy is both untested and inherently flawed. The assertion that “a 3-year period will allow adequate lag time to quantify impacts to mountain goat populations” (at iv) is scientifically indefensible. Goats are not sexually mature until 4 to 6 years, rarely have twins, and have average lifespans of 8 years (White, Gregovitch, Levi at 1138). AM will rely on accurately monitoring goat populations to see if identified thresholds are exceeded. However, population monitoring is extremely challenging in that:	The FSEIS has been amended to reflect a 4-year period, please see Table 2.2.
HA-1-EM-1700	● There will be data gaps because annual surveys are weather dependent and “in some years, not all surveys are completed.” (SDEIS at 35)	In the event an annual survey cannot be performed, a modeled population estimate may be utilized. This estimate may be similar to the way in which ADFG estimates populations in and effort to establish harvest quotas if an ariel survey was not performed. BLM will continue to work collaboratively with ADFG to establish this alternative approach.
HA-1-EM-1700	● Aerial surveys “have limited precision and high amounts of variability.” (Id. At 36) ● “Kids and yearlings are difficult to classify from the air, adding more variability to age-class observations.” (Id.)	Thank you for your comment.
HA-1-EM-1700	Basing AM on unreliable observations with only a 3-year lag time could be a recipe for disaster.	The FSEIS has been amended to reflect a 4-year period, please see Table 2.2.

Comment Number	Comment	Response
HA-1-EM-1700	Climate Change The SDEIS section on Climate Change deals solely with emissions (pages 62 and 64) and is woefully inadequate. The FEIS must analyze new information presented in the peer reviewed 2018 publication Projecting the future of an alpine ungulate under climate change scenarios (White KS, Gregovich DP, Levi T; in Global Change Biol. 2018j24:1136-1149 at http://doi.org/10.111/gcb.13919) As record temperatures were set again this year, climate change is real and must be addressed in the FEIS, including climate projections for temperature increases and annual changes in snowfall. For example, summer temperatures are expected to increase between 1.3 and 6 degrees Celsius, and winter snowfall is expected to decrease from .4 to 1.6 meters. (White et al page 1142). Further, “change in alpine environments is occurring at a particularly rapid rate, relative to other ecosystems.” (Id at 1147). These climate projection scenarios will impact goat survival and the continued viability of heli-skiing in the Planning Area. “Climate change represents a primary threat to species persistence and biodiversity at a global scale. Cold adapted alpine species are especially sensitive to climate change.” (Id at 1136). 37 yeas of data on coastal Alaska goat populations show “survival is highest during low snowfall winters and cool summers.” (Id at 1136). The conclusion is that hotter summers will have “stronger negative effects on population trajectories than the positive demographic effects of reduced winter snowfall.” (Id at 1136) The net effect in half of the climate scenarios was goat extinction in 70 years, where smaller sized populations are more likely to die off than larger populations. Further, summer range is expected to decrease by 17 to 86% in 7 of 10 climate scenarios. (Id at 1136).	Thank you for your comment. Additional analysis has been incorporated into the FEIS. Please see Section 3.3 and 4.3.

Comment Number	Comment	Response
HA-1-EM-1700	Explicitly, "population dynamics are linked to climate via direct effects on thermoregulation and energetics, and indirectly through climate effects on plant phenology, population dynamics, and community ecology." Goats are "considered a barometer of ecosystem function, viability, and resilience." (Id at 1147). This essential new information should be factored into all future analysis of impacts to goats in the FEIS.	Thank you for your comment. Additional analysis has been incorporated into the FEIS. Please see Section 3.3 and 4.4.
HA-1-EM-1700	Irreversible and Irretrievable Commitment of Resources Given all of the above information about potential impacts to goats, the NEPA required "hard look" means goats could indeed be an irreversible and irretrievable resource from cumulative impacts including climate change and allowing continued helicopter supported recreation in goat habitat. The FEIS should remove the statement of "no irreversible or irretrievable commitment of resources." (SDEIS at 70).	The preferred Alternative G provides for Adaptive Management strategies, which are outlined in Section 2.2.3 and Appendix D. This adaptive decision process promotes flexible resource management decision making based on clearly identified outcomes or goals that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. As the BLM works collaboratively with the ADF&G and permittees to monitor for use and for wildlife health, the BLM can adapt their permitting to meet the goals for a given species. Management responses such as establishing areas of avoidance, limiting season, duration, and frequency of use; and/or reducing permitted landings, if necessary, can be instituted to avoid an irreversible or irretrievable commitment of resources.
HA-1-EM-1700	Cumulative Impacts The NEPA required "hard look" at cumulative impacts is absent. The FEIS needs to discuss how the following potential impacts are cumulative in respect to BLM issued helicopter landing permits: ● Borough and Forest Service issued helicopter landing permits ● Helicopter use at the Palmer mining project	As stated in Section 4.1., the geographic scope for the cumulative effects analysis is defined as the State of Alaska GMU 1D. The geographic scope for the cumulative effects analysis is defined as the State of Alaska Game Management Unit 1 D. 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. While other agencies may permit helicopter activities within the planning area the BLM has no jurisdiction over lands that are not under BLM management. Helicopter use occurring on borough or Forest Service lands within the Haines planning area is considered to be outside of the temporal scope of BLM approved heliskiing activities occurring on BLM lands. Cumulative Effects analysis to include Borough permit landings are included in Section 4.3 of the FEIS.

Comment Number	Comment	Response
HA-1-EM-1700	● Blasting at the Palmer Project	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. Helicopter use by mining activities within the Haines area occurs outside of the temporal scope of heliskiing activities. Additionally, activities in support of mining are outside of the scope of this planning effort.
HA-1-EM-1700	Bears, Wolverine and other Omissions There is essentially no analysis of impacts to denning bear from allowing “significant” increases in landings in bear denning habitat. There is no analysis of impacts to wolverine despite a promise to do so in the 2009 Scoping document (page 28).	Thank you for your comments. Impacts to brown bear denning areas and wolverine are discussed in Section 4.3 of the FEIS.

Comment Number	Comment	Response
HA-1-EM-1700	There is scant data regarding other backcountry use. There is no worst-case scenario analysis for wildlife. There are no maps showing where Borough and Forest Service permitted landings occur so that one could see the complete picture of impacts. The analysis for lands with wilderness characteristics does not incorporate the concept that a wilderness experience includes a reasonable expectation of solitude – something completely obliterated by the presence of helicopters in the backcountry. (See USFS analysis in their Helicopters in Wilderness EIS).	Data regarding backcountry recreation use is challenging to come by for the planning area. Their are no developed facilities or portals from which to capture data and the use that does occur is infrequent in nature and contains a small amount of participants in comparison to areas of similar geographical size. The geographic scope for the cumulative effects analysis is defined as the State of Alaska Game Management Unit 1 D. While other agencies may permit helicopter activities within the planning area the BLM has no jurisdiction over lands that are not under BLM management. 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. Helicopter use occurring on borough or Forest Service lands within the Haines planning area is considered to be outside of the temporal scope of BLM approved heliskiing activities occurring on BLM lands. It is important to notate the difference between Lands with Wilderness Characteristics (LWC) and congressionally designated Wilderness areas. The BLM lands within the planning area contain **no** congressionally designated Wilderness areas. BLM lands within the planning area which do contain LWC are given consideration measures to minimize potential impacts on wilderness characteristics and other resource values and uses. These measures are developed through individual NEPA design features, mitigations, and permit stipulations. Additionally this planning effort has concluded that 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. The activities have no effect on the landscape, result in no ground disturbing activities, and are neither pervasive nor omnipresent.

Comment Number	Comment	Response
HA-1-EM-1700	Emissions The emissions analysis in Appendix D is understated in the SDEIS. Reducing emissions will “marginally benefit” goat populations. “Nonetheless, long-term strategic and effective conservation efforts focused on emissions reductions are likely to be beneficial and should be encouraged in order to maximize alpine ungulate, and ultimately ecosystem, viability, and resilience.” (White, Gregovich, Levi at 1147, emphasis added). This analysis should be included in the FEIS.	The emissions analysis in appendix E was completed to assure that air quality standards would not be exceeded when combined with other emissions sources within the area. This information may only show a marginal benefit in the overall climate change analysis and potential impacts to wildlife. However, it does show that cumulatively the addition of the proposed number of aircraft operations would not increase emissions above the current standards.
HA-1-EM-1700	Alternative E should be the Preferred Alternative for the following reasons: ● It allocates sufficient landings to meet demand ● It protects important and relevant at risk wildlife resources ● It prioritizes resource protection in the face of climate change ● It has local and statewide support, including support from wildlife biologists ● It satisfies the “priority” language of FLMPA and BLM Manual ● It is the only alternative that will guarantee a monitoring and control area into the future Since 1995 BLM has continued to state it does not know what the long and short-term impacts are from allowing increasing helicopter landings in goat habitat. This statement has been repeated in every environmental review. It’s past time to make a management decision that will allow this knowledge to be ascertained. Conclusion There are good planning proposals contained in the SDEIS that address the issues and concerns that prompted this document, and there are bad planning proposals that do not address the pertinent issues and have no logical rationale for their inclusion. This is particularly true for the preferred alternative.	Thank you for your comment.

Comment Number	Comment	Response
HA-1-EM-1700	We appreciate that BLM finally acknowledges that ACEC requirements have been met regarding relevance and importance. We also appreciate that the SDEIS is to adopt larger goat habitat buffers as recommended by NWSGC. We believe Alternatives F and G – the only alternatives not mandated by law and policy - fail to achieve a balance between resource conservation and helicopter landing allotments. (BLM is required to have the No Action alternative (A) and the ACEC alternative (E)). We request BLM adjust Alternatives F and G to protect mountain goat resources in the final environmental document. This means retaining the MCA in each alternative and significantly reducing both summer and winter landings. We also request this document seriously address goat survival by incorporating the completed analysis of 10 years of goat monitoring data in the Planning Area; and address climate change by evaluating new information that indicates the possibility of goat extinction in 70 years.	The BLM multiple use mandate (FLPMA, 1976) requires the "management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people." Incorporating all the recommendations of NWSGC into the current SDEIS would preclude use, such as helicopter supported recreation, from nearly the entire planning area. This preclusion of use would be in conflict with the multiple use mandate. However, information contained within the NWSGC position statement was taken into consideration and/or incorporated into analysis. In particular, a no-landing buffer distance of 1500m was applied to known mountain goat kidding areas between May 1 and June 15. The FEIS allows for the incorporation of new or additional data, such as the kidding/nursery habitat you mentioned, should it become available. Alternative E has been modified to include the entire boundary of the original MCA. Additionally, the preferred alternative, as well as others considered, include area/areas acting as a "control" in order to facilitate future behavioral research in which commercial helicopter activity is not permitted. See section 2.2.2 and table 2.3. Climate change impacts to mountain goats has been added in Section 3.3.
HA-1-EM-1700	Further we believe that it is possible to finally assess impacts of heli-skiing on goats if BLM will 1) Retain a large MCA, preferably with ACEC/RNA designation; 2) Manage the helicopter ski landing permitting area so that BLM requires information on location and how often each run is utilized; and 3) Compare impacts in areas of no, low, medium and high use.	Thank you for your comment. Alternative E retains the MCA as an ACEC-RNA while alternative G designates an area of 65,457 acres that in essence operates as a "control." Upon completion of the FEIS, all special recreation permits are subject to an individual NEPA process. At this time, information such as intended flight corridors, ski runs or pick-up and drop-off locations and numbers of landings will be required for analysis.
	Overview	

Comment Number	Comment	Response
HA-1-EM-1800	The Takshanuk Watershed Council (TWC) appreciates the opportunity to comment on the Supplemental Draft Environmental Impact Statement for the Haines Amendment to the Ring of Fire Resource Management Plan (SDEIS). We would also like to thank BLM staff at the Glenallen Field Office for their outreach efforts, including multiple trips to Haines and face-to-face meetings with TWC staff at our offices. Thank you very much. TWC would like to express its support for Alternative E, with the following amendments: § Expand the Area of Critical Environmental Concern (ACEC) to encompass all (or nearly all) of the existing Monitoring and Control Area (MCA) § Change the designation of both the north and south blocks from Extensive Recreation Management Area (ERMA) to Special Recreation Management Area (SRMA) § Prohibit summer helicopter-supported recreation in the south block TWC believes that the principal values upon which a BLM management plan for the Haines Planning Area should be based are: 1. Wildlife conservation 2. Cultural resource conservation 3. Hunting and subsistence 4. Non-motorized backcountry recreation Commercial helicopter operations should be allowed, but managed conservatively and so as to not detract from the above four principal values.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1800	Commercial Helicopter Activities TWC supports maintaining the number of permitted landings at current levels. We also support the Haines Borough Assembly's recommendation that summer helicopter tourism not be allowed at all in the south block. While we can appreciate the intent behind an adaptive management strategy which would allow ever-increasing landings so long as there is a demand and there is no evidence of harm to goat populations or other values; a more conservative strategy, and one that places far less management burden on the BLM, would be to hold permit levels where they are now, continue to study and monitor the goat populations both inside and out of the control area, and if in the future it is deemed appropriate, the management plan can be amended to allow for increased commercial use. According to Table 3.1 on page 32 of the SDEIS, there does not appear to be any demand for more landings than what is currently permitted. It has been more than ten years since 2700 commercial landings have occurred on BLM lands. Summer helicopter tours are prohibited in the Haines Borough, winter tours are strictly regulated, and the people of the area have consistently expressed opposition to any significant expansion of the commercial helicopter tourism industry. Until this situation changes, we suggest the BLM maintain the status-quo on the number and the nature of helicopter landing permits issued.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.

Comment Number	Comment	Response
HA-1-EM-1800	On page 38 of the SDEIS it states that “goats in the Haines and Skagway areas are identified as being genetically unique and harboring the descendants of an [ice age] refugial population (Shafer et al. 2011).” And for thousands of years, mountain goats have been a very important cultural and subsistence resource. Numerous studies have demonstrated the potential adverse effects of helicopter activities on mountain goats. The SDEIS cites many of these studies on pages 34-40. Given that there is little to no demand for more helicopter landing permits, along with the potentially grave negative impacts to wildlife of helicopter tourism, the BLM should follow the precautionary principle when managing helicopter tours. If there is no great demand or need to increase permit levels, then they should not be increased.	All BLM Special Recreation Permits (SRP's) are subject to any condition or stipulation deemed necessary for the protection of public interest. An SRP authorizes special uses of the public lands and related waters and, should circumstances warrant, the permit may be modified by the BLM at any time, including modification of the amount of use. The authorized officer may suspend or terminate an SRP if necessary to protect public resources, health, safety, the environment, or because of non-compliance with permit stipulations. Additionally, operators would have to be using 75 percent of their permitted landings before the BLM would consider authorizing more landings.
HA-1-EM-1800	Special Recreation Management Area Designation TWC supports an SRMA designation over ERMA so that the principal recreational values for which the BLM manages can be hunting, subsistence, wildlife viewing, and cultural resource conservation. Helicopter-supported tourism should also be a value and allowed in the management area, but it should be secondary to those listed above. The reason is because of the likelihood that helicopter traffic will adversely affect all other users of the land, as well as local residents. The potential impact of helicopter tourism to other users, and to wildlife, is an order of magnitude greater than that of a group of hunters, skiers, berry-pickers, or backpackers. Limiting the volume of helicopter traffic will also increase the quality of the experience for those partaking of the helicopter tour itself.	Thank you for your comment

Comment Number	Comment	Response
HA-1-EM-1800	Expanded Area of Critical Environmental Concern TWC would like to see an expansion of the ACEC boundaries proposed in Alternative E to more closely follow those of the existing Monitoring and Control Area, for a number of reasons. First, the upper Chilkoot River Valley is a popular winter travel route. On skis or snowshoes and good snow conditions, one can start at the Lutak Road, cross Chilkoot Lake, head up and over Assignation Pass, down Assignation Creek to the Chilkat River, and then down the Chilkat and back to the road system. The ACEC boundary proposed in Alternative E excludes all of the east side of the upper Chilkoot Valley. Second, the mountain framing the eastern boundary of the upper Chilkoot Valley, identified in the SDEIS only by its elevation, 4622 feet, and excluded from the ACEC in Alternative E, contains a significant amount of high-quality winter goat habitat. The goat population which utilizes this area, the “Chilkoot-Ferebee”, is harvested extensively down-valley around Chilkoot Lake. It would be reasonable to assume that herds farther up the drainage in the “Mount 4622” area are often a source for replacing the animals taken by hunters at the lake. If Mount 4622 is made available to helicopter skiing, it is easily accessible from the 18-Mile Haines Highway heliport. This would open up a new corridor of helicopter traffic very near to the communities of Klukwan and the 18-Mile subdivision. This flight corridor does not see any activity at all now, and this would be a significant expansion of commercial helicopter traffic and associated impacts to both residents and wildlife in the Chilkat Valley, as well as over the Takshanuk Ridge in the Chilkoot Valley. Third, TWC would like to see the goat monitoring study continue, and it would seem ideal, from a research standpoint, to maintain the control area at nearly the same size and boundaries as it has been throughout the study to date. TWC thanks you for the opportunity to comment on this draft management plan, and we look forward to more constructive collaboration in the future. HA-1-EM-1800	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-EM-1900	The selection of Alternative G as the preferred alternative indicates BLM is not taking its responsibility to protect the important and unique mountain goat resources in the Haines Block seriously. I fully support Alternative E with 2 important modifications: 1) The ACEC should be the size of the existing Monitoring and Control Area, and should not be shrunk as proposed; and 2)BLM should require fine scale mapping of ski runs – the only way to determine impacts of helicopter landings on goats.	Thank you for your comment. Alternative E has been modified to include the entire MCA as an ACEC-RNA. Predetermined and predictable flight routes as well as pick-up and drop-off landing locations are implementation level decision that will be analyzed at the time of permit application.
HA-1-EM-1900	The SDEIS acknowledges that the two criteria for ACEC determination have been met. The Federal Land Management Policy Act and the BLM Manual both require BLM give “priority” status to establishing ACEC’s. Selecting Alternative G (or any other alternative) would go against this policy. Given the real dangers to goat populations articulated in the SDEIS and also posed by climate change, including the possibility of extinction in 70 years (Projecting the future of an alpine ungulate under climate change scenarios by Kevin White, et.al., 2019), BLM must create an ACEC which will give the highest available protection at least to some of the unique and important goat populations in the Haines Block. The FEIS must take the NEPA required “hard look” at climate change, as the SDEIS climate change analysis is woefully inadequate, and does not include the new information provided by White, et.al.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.
HA-1-EM-1900	The preferred alternative has no scientifically defensible mechanism for protection goats from helicopter impacts. Given all the shortcomings of aerial surveys discussed in the SDEIS, there is no way these surveys can reliably provide the data necessary to institute the proposed adaptive management strategy. It is absurd to propose that a 3 year lag time (Alternative G) is sufficient to ramp up landing numbers, given the SDEIS discussed inaccuracies built into aerial surveys, and given that goats do not reach sexual maturity until between age 4 and 6, live only an average of 8 years, seldom have more than one offspring, and do not produce offspring every year. (White and Gregovich, 2018).	Thank you for your comment. In the FEIS the 3-year monitoring period was amended to 4 in Alternative G (see Table 4.3).

Comment Number	Comment	Response
HA-1-EM-1900	Alternative E will protect at least some of Haines Block goat populations, while allowing an adequate (rather than excessive) number of landings. As SDEIS Table 3.1 clearly shows, helicopter landing permits have exceeded demand in every year that they have been issued since the last century. The table also shows that actual use has been declining. Therefore, there is no rationale for the "significant" increases of landings proposed in Alternatives F and G. In fact, proposals that significantly increase landings while actual use has been declining should be considered arbitrary and capricious.	The maximum number of landings for each alternative are an overarching number to cover the permitting needs for the life of the plan. Our adaptive management strategy, takes demand and impacts into consideration. Before there is an increase in permitted landings, there would be four (4) years of monitoring for goat health, specifically. Additionally, operators would have to be utilizing 75 percent of their permitted landings before the BLM would consider authorizing more landings.
HA-1-EM-1900	There is no rational reason to decrease the Monitoring and Control Area when creating the ACEC. The other necessary modification for this alternative is that BLM should manage for actual ski runs (drop-off and pick-up locations) rather than large areas. Analyzing ski run data while retaining a substantial no fly zone within the ACEC will allow BLM to finally determine impacts to specific goat populations from the permitted activity. Absent this specific information, BLM will again be using the language of the 1995 EA for Helicopter Landings in the Haines/Skagway Area, and repeated again in the 2019 SDEIS: "Little is currently known of the specific short-or long-term population trends of mountain goats in the Planning Area" (at page 38). This willful ignorance is unnecessary and must stop. Selecting Alternative E as modified will do wonders for understanding short and long term impacts.	Thank you for your comment. Alternative E has been modified to include the entire MCA as an ACEC-RNA. Predetermined and predictable flight routes as well as pick-up and drop-off landing locations are implementation level decision that will be analyzed at the time of permit application.
HA-1-EM-2000	LCC continues to advocate that BLM create an Area of Critical Concern (ACEC) to be managed as a Research Natural Area (RNA) on BLM lands in the Haines area during the Ring of Fire environmental review process. Multiple other conservation organizations have signed on to ACEC-supportive statements in prior years. Affirmative respondents as of the comment deadline are listed below the affirmative statement.	Thank you for your comment. The supplemental draft includes a proposed and analyzed ACEC, meeting relevance and importance criteria, which is described in Section 2.3, alternative E in the SDEIS. Other proposed ACECs that did not meet relevance and importance are detailed in Appendix C.

Comment Number	Comment	Response
HA-1-EM-2000	"We believe the higher levels of protection afforded by the ACEC/RNA special management designations in Alternative E are necessary because mountain goats are known to be sensitive to disturbance from the helicopter supported recreation permits issued in the Planning Area." Alaska Wildlife Alliance (Nicole Schmitt) Audubon AK (Natalie Dawson) Lynn Canal Conservation (Jessica Plachta)	Thank you for your comment.
HA-1-EM-2100	At a regular business meeting of the Haines Borough Assembly on August 1, the Assembly considered the proposed alternatives to amend the Ring of Fire Management Plan in the Haines planning area. The Assembly moved to support the Agency Alternative E. The Assembly considers that Alternative E best represents the Borough's historical planning efforts.	Thank you for your comment.
HA-1-EM-2100	The Assembly respectfully requests that any alternative plan ultimately adopted by BLM prohibit helicopter landings during the summer [May through August] in the South Block. The Haines Borough does not permit summer helicopter tours, and would appreciate BLM's support in the community's desire to curtail summer recreational helicopter activity.	Thank you for your comment. BLM managed lands open to summer helicopter use near Haines, Alaska would be accessed through Haines Borough lands. As such, summer recreational helicopter activity on BLM managed lands are largely dependent on Haines Borough decisions on permitting.
HA-1-EM-2200	I am a full-time year round resident of Haines, Alaska. I am writing in support of the Agency Preferred - Alternative G. I have attended many of the public meetings that have been held as BLM was developing the plan. I appreciate the thoughtfulness and sensitivities to the community that were considered when the Agency developed the preferred Alternative G. I look forward to its adoption. I have served my community as a Haines Borough School Board Member, a Haines Planning Commissioner, and currently serve as a Haines Borough Assembly Member. My experience as a public servant in our community has taught me of the need to thoughtfully balance completing needs and perspectives. The preferred Alternative G takes a balanced approach to the needs of our community.	Thank you for your comment

Comment Number	Comment	Response
HA-1-SM-10100	The Alaska State Historic Preservation Office (AK SHPO) received your request for review (dated May 3, 20 I 9) regarding the Cultural Resources sections of the draft Haines Amendment to the Ring of Fire Resource Management Plan (Plan) on May 6, 2019. Our office has reviewed the Plan and we offer the following comments for your consideration. Our office believes that BLM has met the good faith standard for identification given the scope and scale of the Plan and has adequately identified and considered properties of religious or cultural significance of peoples affected by the Plan. The connections made between resources, cultural practices, and physical location(s) seem sound and were documented as vital to the continuation of cultural practices and the identity of the affected communities. We believe that the measures considered in the Preferred Alternative(G) to avoid or minimize effects to known and unidentified historic properties provide a reasonable balance between consideration of historic properties, cultural resources, and use. As the Plan is mostly an administrative document, our office recommends that BLM completes Section 106 as individual undertakings move forward. We also recommend BLM proactively complete determinations of eligibility for listing in the National Register of Historic Places for properties located on BLM lands that were identified during the planning process.	Thank you for your comment

APPENDIX B: Special Recreation Management Area Matrixes,

Haines North Block Special Recreation Management Area Matrix

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

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.

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: • 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

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

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.

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 retaining the BLM's current management boundary on the western side of the MCA as well as the eastern boundary with the ridge and mountain tops southwest of the Chilkat and Ferebee Glaciers. This new ACEC boundary encompasses 102,257 acres of BLM managed lands (see Map 3).

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 and Upper Chilkoot River drainages and includes geographic features such as Klutshah, Klukwan, Takshanuk and Hiteshitak Mountains, Mount Raymond and 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.

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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. Jil<u>k</u>aat 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 retaining the BLM's current management boundary on the western side of the MCA as well as the eastern boundary with the ridge and mountain tops southwest of the Chilkat and Ferebee Glaciers. 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 102,250 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 within and adjacent to the Chilkoot Trail and Dyea National Historic Landmark, including 78.97 acres of U.S. Survey 5106C and 40 acres of U.S. Survey 5109 in sections 33 and 34 of T27S, R59E, Copper River Meridian.
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 Three previous archaeological investigations along this portion of the Chilkoot Trail (Carley 1981, Gurcke 1986 and Jesperson and Pittenger 1984), did not locate and record any cultural resources on U.S.S. 5106C. A BLM archaeological survey of this parcel in August 2019, located a single 24" by 14" by 30" deep pit with no other discernible archaeological features and an unrecorded 1940's to 1950's logging camp on an adjacent private parcel. These same surveys also examined U.S.S. 5109 from adjacent private property, which determined that the steep slopes composed of moss covered granite bedrock was low in probability and inaccessible for pedestrian surveys. The single known site on these BLM parcels neither meets the criteria for a BLM ACEC nor as a contributing property to the NHL. The BLM would not currently recommend this site as eligible to the NRHP. Regarding its significance to the Chilkoot and Dyea District NHL, any formal evaluation would find the above pit a *non-contributing property*. The National Register Bulletin for National Historic Landmarks (NPS 1999) states that "A property should also be exceptionally important compared to similar properties within that theme." There is no evidence that this site would meet that standard. Additionally, the Bulletin states "a property must retain the essential physical features that enable it to convey its historical significance." Neither the pit, nor the two BLM parcels as a whole, retain *any* features that convey the historical significance of the NHL. Therefore, based upon this review of both ACEC and NHL guidelines, the BLM has determined that the parcels do not meet the relevance criterion to be considered for designation as an ACEC.
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.

ACEC Evaluation Table	Dyea uplands at Taiya River Mouth
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 is nothing to indicate the single site on U.S.S. 5106C would be recommended significant at more than a local level, and therefore it does not meet the ACEC importance criterion to have "more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource" (BLM Manual 1613 p11).
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.
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. Additional archaeological investigations in August 2019 by the BLM, did not find any cultural resources that would meet the relevance and importance criteria for an ACEC.
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:	317,096 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), avoidance or exclusion zones, restrictions in duration and/or frequency, reduction in permitted landing allocations. The following are interim indicators and their associated triggers. With additional data collection, increased scientific knowledge and/or academia analysis and review, amendments or modifications may be made to indicators, triggers and their values. In the event that annual surveys are not completed, thus resulting in data gaps, predictive models may be utilized to inform current conditions.

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 helicopter supported recreation permitted geographic goat region (see Map 6 in Section 7.0) 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 PM10. PM10 emissions were assumed to be comprised of 90 percent PM2.5.

Emissions (pounds/mode) - 1 Trip

Mode	CO	VOC	NO2	SO2	PM[1]10	PM2.5	CO2
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 (kg/sec)	Time in Mode (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	NO2	SO2	PM[1]10	PM2.5	CO2
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	NO2	SO2	PM10	PM2.5	CO2
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	SO2	NO2	PM10	PM2.5	VOC	CO2 [3,4]
LTO[2]	12.00	0.01	0.07	0.24	0.16	0.15	163.14

CO - Carbon Monoxide
SO2 - Sulfur Dioxide
NO2 - Nitrogen Dioxide
PM10 - Particulate Matter less than 10 microns in diameter
PM2.5 - Particulate Matter less than 2.5 microns in diameter
VOC - Volatile Organic Compounds
CO2 - 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%20 travel%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	SO2	NO2	PM10	PM2.5	VOC	CO2[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]	SO2[3,4]	NO2[4,5]	PM10[6]	PM2.5[6]	VOC[4]	CO2[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%20t ravel%20incl uding%20small%20fixed- wing%20and%20helicopter%20aircraft%20-%20generic.xls)
2 - All sulfur emitted assumed to be SO2
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	SO2	NO2	PM10	PM2.5	VOC	CO2[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.