

APPENDIX A

Photographs



Photograph 1. View to southwest from Merrill Pass (Low Site) October 2005 with Test Camera System in foreground.



Photograph 2. View to northeast Merrill Pass (Low Site) October 2005, with Test Camera System in foreground.



Photograph 3. View to northeast from Merrill Pass High Site October 2005.



Photograph 4. View of the Merrill Pass High Site from Low Site October 2005.



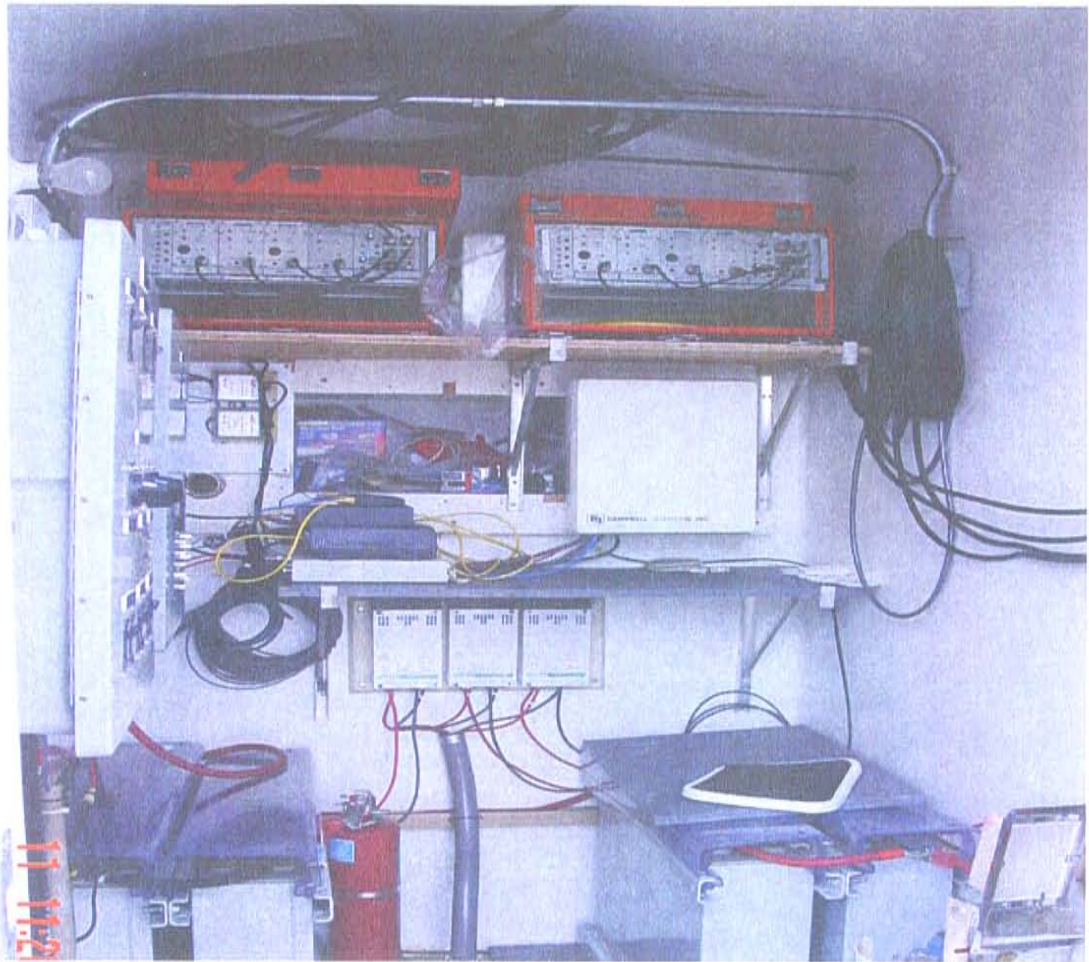
Photograph 5. Lake Clark Remote Communications Outlet and Weather Camera System (RCO/WCAM).



Photograph 6. View of Lake Clark Pass from RCO/WCAM Site.



Photograph 7. Foundation for Lake Clark RCO/WCAM System.



Photograph 8. Lake Clark RCO/WCAM equipment shelter interior.

APPENDIX B

ANILCA Section 810(a) Summary Evaluation and Findings

I. INTRODUCTION

This evaluation and finding was prepared to comply with Title VIII, section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It evaluates the potential restrictions to subsistence activities which could result from installation and operation of Federal Aviation Administration (FAA) remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass in Lake Clark National Park and Preserve (LACL). The proposed actions would be administered in accordance with National Park Service (NPS), ANILCA, and the laws governing national wilderness areas in Alaska.

II. THE EVALUATION PROCESS

Section 810(a) of ANILCA states:

"In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands . . . the head of the Federal agency . . . over such lands . . . shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for]-subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency:

1. Gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
2. Gives notice of, and holds, a hearing in the vicinity of the area involved; and
3. Determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity would involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps would be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."

Lake Clark National Park, containing approximately 2,439,000 acres of public lands and Lake Clark National Preserve, containing approximately 1,214,000 acres of public lands, was created by ANILCA, section 201(7)(a) for the following purposes:

"The park and preserve shall be managed for the following purposes, among others: To protect the watershed necessary for perpetuation of the red salmon fishery in Bristol Bay; to maintain unimpaired the scenic beauty and quality of

portions of the Alaska Range and the Aleutian Range, including active volcanoes, glaciers, wild rivers, lakes, waterfalls, and alpine meadows in their natural state; and to protect habitat for and populations of fish and wildlife including but not limited to caribou, Dall sheep, brown/grizzly bears, bald eagles, and peregrine falcons. Subsistence uses by local residents shall be permitted in the park where such uses are traditional in accordance with the provisions of Title VIII."

Certain provisions of Title XIII of ANILCA govern navigational aids and other facilities within the conservation system units established or expanded by this act. Specifically, section 1310(b) addresses new facilities. This provision permits the establishment, operation, and maintenance within any conservation system unit of new air navigation aids and related facilities, facilities for national defense purposes, and related air navigation aids.

Installation of navigational facilities on NPS lands requires consultation between the NPS and the Secretary of the Interior. The establishment, operation, and maintenance of weather camera communication stations are permitted but only in accordance with terms and conditions as may be mutually agreed by the NPS and the Secretary of the Interior in order to minimize the adverse effects of such activities within such unit.

The potential for significant restriction must be evaluated for the proposed action's effect upon "...subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use." (Section 810(a))

III. PROPOSED ACTION

The NPS is considering two alternatives that address development and operation of remote navigation-weather camera communication sites in the Merrill Pass (3,500 ft.) and Lake Clark Pass (1,000 ft.) areas of LACL. The environmental assessment contains a detailed discussion of the project and its alternatives. The EA proposes the following action alternatives:

ALTERNATIVE A: NO ACTION

Under the No Action Alternative, the proposed Merrill Pass remote navigation-weather camera communication site would not be constructed, however, operation and maintenance of the Lake Clark Pass site would continue.

ALTERNATIVE B: PREFERRED ACTION

Under the Preferred Alternative, the NPS would issue a right-of-way permit to the FAA to install, operate, and maintain two WCAMs at Merrill Pass (low site and high site), and continue the operation and maintenance of the existing RCO/WCAM at Lake Clark Pass.

IV. AFFECTED ENVIRONMENT

A summary of the affected environment pertinent to subsistence uses is presented in this section.

Section 803 of ANILCA defines subsistence uses as, "the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible by-products of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade."

ANILCA and National Park Service regulations authorize subsistence use of resources in LACL (Codified in 36 CFR Part 13, Subparts A, B, and C). In accordance with Title VIII of ANILCA, subsistence uses are also allowed on adjacent federal public lands managed by the Bureau of Land Management in Unit 16B.

Regional subsistence activities that occur in LACL include hunting, trapping, fishing, digging for clams, catching shellfish, gathering firewood, berries, wild plants and bird eggs.

Historical resource utilization patterns, such as fish camps or communal hunts, are linked to traditional social and subsistence use patterns. Sharing of resource occurs between park resident zone communities, as well as other communities throughout the region.

Some of the major resources used for subsistence are: black bear, brown bear, moose, dall sheep, beaver, snowshoe hare, fox, lynx, mink, wolf, wolverine, ptarmigan, waterfowl, salmon, trout, clams, berries, wild edible plants, and other wood resources.

Lowlands within LACL support nesting habitat for ducks, geese, swans, grouse, and ptarmigan. ANILCA provides a preference for local rural residents over other consumptive users should a shortage of subsistence resources occur and allocation of harvest becomes necessary.

Comprehensive descriptions of the affected environment can be found in:

- Lake Clark National Park and Preserve, Final General Management Plan, Land Protection Plan, National Park Service, 1986.
- Lake Clark National Park and Preserve Final Environmental Impact Statement, Wilderness Recommendation, National Park Service, 1988.

The NPS recognizes that patterns of subsistence activity vary from time-to-time, and from place-to-place, depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in a given year may vary considerably from previous years because of weather, migration patterns, and natural population cycles.

V. SUBSISTENCE USES AND NEEDS EVALUATION

Potential Impacts to Subsistence Use

To determine the potential impacts on existing subsistence activities for the proposed action, three evaluation criteria were analyzed relative to existing subsistence resources.

- The potential to reduce important subsistence fish and wildlife populations by (a) reductions in number, (b) redistribution of subsistence resources, or (c) habitat losses;
- What affect the action might have on subsistence fisherman or hunter access;
- The potential for the action to increase fisherman or hunter competition for subsistence resources.

1. The potential to reduce populations

(a) Reduction in Numbers:

Alternative B – Preferred Alternative: Install and operate remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass. Year-round activities associated with installation, service and aircraft use at the site are anticipated. Significant wildlife population reductions are not expected to occur.

(b) Redistribution of Resources:

Alternative B – Preferred Alternative: Install and operate remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass. With this alternative, no significant redistribution or displacement of subsistence wildlife is expected to occur.

(c) Habitat Loss:

Alternative B – Preferred Alternative: Install and operate remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass. Under Alternative B installation, site development and use is not expected to significantly impact critical habitat for moose, furbearers, waterfowl and other wildlife. The superintendent may enact restrictions if necessary to protect the continued viability of a particular fish or wildlife population within LACL.

2. Restriction of Access:

Alternative B – Preferred Alternative: Install and operate remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass. Alternative B is not expected to significantly change regional subsistence use patterns on federal public lands. Access for traditional subsistence uses is granted pursuant to ANILCA, sections 811(a)(b) and 1110(a) and NPS regulations within Title 36 Code of Federal Regulations.

3. Increase in Competition:

Alternative B – Preferred Alternative: Install and operate remote navigation-weather camera communication sites at Merrill Pass and Lake Clark Pass. Alternative B is not expected to result in an increase in competition for subsistence resource on federal public lands which are open to eligible subsistence users. Federal regulations and provisions of ANILCA mandate that if and when it is necessary to restrict taking of fish or wildlife subsistence users are given a priority over other user groups. Continued implementation of the ANILCA provisions should mitigate any increased competition from resource users other than subsistence users. The superintendent may enact restrictions if necessary to protect the continued viability of a particular fish or wildlife population within LACL.

VI. AVAILABILITY OF OTHER LANDS:

No other lands are available for WCAM facilities. The FAA selected the Merrill Pass sites and Lake Clark site for the WCAM and RCO systems because of the unique geography and the established flight paths through both passes for civilian and military aircraft. The proposed action is consistent with NPS mandates and the LACL General Management Plan and Land Protection Plan.

VII. FINDINGS

This analysis concludes that the proposed action would not result in a significant restriction of subsistence uses.

APPENDIX C

Weather Camera System and Remote Communication Outlet Equipment List

Weather Camera System and Remote Communication Outlet Equipment

Equipment List for Lake Clark Pass RCO #2

- Three 30-foot galvanized steel towers;
- Three 2-foot by 2-foot foundation pads for the towers;
- A total of 18 guy wires per site, six guy wires per tower connected to three anchor points for each tower;
- Twelve 32-inch wide by 60-inch long solar panels per site, four solar panels each per tower;
- One timber mat building foundation measuring, 4 feet by 12 feet, elevated approximately 3 feet above the ground;
- One 6-foot wide by 6-foot long by 8-foot tall prefabricated building;
- One 4-foot diameter V satellite dish, located on top of the building;
- Six Exide Absolyte[®], maintenance-free, non-venting batteries. Batteries seismic Zone 4 certified;
- Three 800-watt, Southwest Windpower wind generators with 42-inch propellers;
- A grounding loop buried around the facility to protect the equipment from lightning strikes and static discharges; and
- An electrical conduit running above ground between the towers and equipment building.

Equipment List for the Low Site at Merrill Pass

- Three 30-foot galvanized steel towers;
- Three 2-by 2-feet square foundation pads for the towers;
- A total of 18 guy wires per site, six guy wires per tower connected to three anchor points for each tower;
- Twelve 32-inch wide by 60-inch-long solar panels per site, four solar panels each per tower;
- One timber mat building foundation, measuring 4 feet by 12 feet, elevated approximately 3 feet above the ground;
- One 6-foot-wide by 6-foot-long by 8-foot-tall prefabricated building;
- One 4-foot diameter V satellite dish, located on top of the building;
- Six Exide Absolyte, maintenance-free, non-venting batteries. Batteries seismic Zone 4 certified;

- Three 800 watt, Southwest Windpower wind generators with 42-inch propellers;
- A grounding loop buried around the facility to protect the equipment from lightning strikes and static discharges; and
- An electrical conduit running above ground between the towers and equipment building.

Equipment List for the High Site at Merrill Pass

Equipment list for the high site at Merrill Pass is identical to the other two sites except for the following:

- Two 20-foot galvanized steel towers would be used instead of three 30-foot towers;
- Two 3-foot by 3-foot foundations would be needed for the towers;
- Eight solar panels 32 inches wide by 60 inches long would be required, four panels per tower;
- Two 800 watt, Southwest Windpower wind generators with 42-inch propellers; and
- A total of 12 guy wires, six guy wires per tower connected to three anchor points for each tower.

APPENDIX D

Wilderness Minimum Requirements Decision Guide



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKSHEETS

“ . . . except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act...”

– the Wilderness Act, 1964

Please refer to the accompanying MRDG Instructions for filling out this guide. The spaces in the worksheets will expand as necessary as you enter your response.

Step 1: Determine if any administrative action is necessary.

Description: Briefly describe the situation that may prompt action.

Private and commercial pilots have a need for pictorial image of current weather conditions to assist them in making weather-related decisions and for improving aviation safety for traveling to remote communities in Alaska. The FAA received funding to install an Aviation Closed Circuit Television WCAM in Merrill Pass as an aid to Visual Flight Rule pilots operating in the Lake Clark area.

Lake Clark and Merrill Passes are major air transportation routes with Lake Clark Pass having five to ten times the amount of air traffic on an annual basis as Merrill Pass. Numerous accidents have occurred in the passes because of poor weather conditions. Pilots flying in small piston powered aircraft between Anchorage and western interior Alaska normally fly through Merrill Pass. When inclement weather conditions warrant, pilots need to decide if the pass is safe for to fly through. Sometimes pilots risk flying into the pass from one end and must make a split second decision to either continue through the pass or make a U-turn because of poor visibility or low cloud cover. This practice increases the risk for accidents because pilots deciding to continue through the pass because of clear conditions on one side of the mountain still may encounter poor visibility on the other side of the pass. Once they miss their opportunity to make the U-turn they are committed and must continue through the pass regardless of the weather conditions. Merrill Pass is littered with numerous crash sites from pilots who thought the pass was clear on one of the pass only to encounter poor visibility on the other side.

To determine if administrative action is necessary, answer the questions listed in A - F on the following pages.

A. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Are there valid existing rights or is there a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows consideration of action involving Section 4(c) uses? Cite law and section.

Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

B. Describe Requirements of Other Legislation

Do other laws require action?

Yes: ☒ No: ☐ Not Applicable: ☐

Explain: The Alaska National Interest Lands Conservation Act Sections 1310 (a) and (b) for Navigation Aids and Other Facilities apply to WeatherCam sites in Lake Clark and Merrill Passes. Section 1310 (a) applies to the Lake Clark Pass site since it is an existing facility and Section 1310 (b) applies to the Merrill Pass site since new air navigation aids will be developed.

The existing Lake Clark Pass Remote Communication Outlet (RCO) was established prior to park designation. The Lake Clark Pass site was originally used for a remote FAA communication facility and is now used as an RCO and weather camera site. At one point in its history, the RCO site maintained by the FAA used a radio isotope thermal generator that used strontium-90 as a fuel source. The generator was installed in 1978 and removed in 1981. The RCO was installed at Lake Clark Pass in 1981. The WCAM at Lake Clark RCO was installed in 2004.

§1310 (a) EXISTING FACILITIES.--Within conservation system units established or expanded by this Act, reasonable access to, and operation and maintenance of, existing air and water navigation aids communications sites and related facilities and existing facilities for weather, climate, and fisheries research and monitoring shall be permitted in accordance with the laws and regulations applicable to units of such systems, as appropriate. Reasonable access to and operation and maintenance of facilities for national defense purposes and related air and water navigation aids within or adjacent to such areas shall continue in accordance with the laws and regulations governing such facilities notwithstanding any other provision of this Act. Nothing in the Wilderness Act shall be deemed to prohibit such access, operation and maintenance within wilderness areas designated by this Act.

(b) NEW FACILITIES.--The establishment, operation, and maintenance within any conservation system unit of new air and water navigation aids and related facilities, facilities for national defense purposes, and related air and water navigation aids, and facilities for weather, climate, and fisheries research and monitoring shall be permitted but only (1) after consultation with the Secretary or the Secretary of Agriculture, as appropriate, by the head of the Federal department or agency undertaking such establishment, operation, or maintenance, and (2) in accordance with such terms and conditions as may be mutually agreed in order to minimize the adverse effects of such activities within such unit.

C. Describe Other Guidance

Does taking action conform to and implement relevant standards and guidelines and direction contained in agency policy, unit and wilderness management plans, species recovery plans, tribal government agreements, state and local government and interagency agreements?

Yes: ☒ No: ☒ Not Applicable: ☐

Explain:

D. Describe Options Outside of Wilderness

Can this situation be resolved by an administrative activity outside of wilderness?

Yes: ☐ No: ☒

Explain: No options exist for installation of the WeatherCams outside of the wilderness. The FAA selected the Merrill Pass and Lake Clark RCO #2 sites for the WeatherCam because of the unique geography and the established flight paths through both passes for civilian aircraft.

E. Wilderness Character

Is it necessary to take administrative action to preserve wilderness character, as described by the qualities listed below?

Untrammeled: Yes: ☐ No: ☒

Explain:

Undeveloped: Yes: ☐ No: ☒

Explain:

Natural: Yes: ☐ No: ☒

Explain:

Outstanding opportunities for solitude or a primitive and unconfined type of recreation:

Yes: ☐ No: ☒

Explain:

Other unique components that reflect the character of this wilderness:

Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

F. Describe Effects to the Public Purposes of Wilderness

Is it necessary to take administrative action in support of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

Recreation: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Scenic: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Scientific: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Education: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Conservation: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Historical use: Yes: ☐ No: ☒ Not Applicable: ☐

Explain:

Step 1 Decision: Is any administrative action necessary?

Yes: ☒ No: ☐ More information needed: ☐

Explain: The installation of the WeatherCams at Merrill Pass and continued operation of the Lake Clark Pass WeatherCam and RCO would enhance aircraft safety in the park, and for aircraft transporting hunters, fisherman, and sightseers from Southcentral Alaska to the Lake Clark area and to the Stony and Kuskokwim river watersheds. The weather cams would increase aircraft safety in the passes by allowing private and commercial pilots access to current weather conditions prior to departure. This would provide an additional tool for pilots to use in planning and conducting flight operations, and for use by Flight Service Station (FSS) personnel in briefing pilots.

The Alaska National Interest Lands Conservation Act Sections 1310 (a) and (b) for Navigation Aids and Other Facilities apply to WeatherCam sites in Lake Clark and Merrill Passes. Section 1310 (a) applies to the Lake Clark Pass site since it is an existing facility and Section 1310 (b) applies to the Merrill Pass site since new air navigation aids will be developed.

If action is necessary, proceed to Step 2 to determine the minimum activity.

Step 2: Determine the minimum activity.

Description of Alternatives

For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.

Alternative A: No-Action

Description: Under the No Action Alternative two new WCAM sites would not be constructed at Merrill Pass, but the operation and maintenance of the RCOWCAM system at Lake Clark Pass would continue.

Under this alternative, FAA personnel or consultants under contract to the FAA would continue performing routine maintenance and repair of the facility. These activities would require at least one helicopter round trip per year, however, additional trips may be necessary to repair equipment on an as needed basis. Based on the most recent maintenance records for existing WCAM systems in Alaska, FAA anticipates the RCOWCAM site at Lake Clark pass will require a total of three helicopter round trips annually for maintenance and repairs.

Effects:

Wilderness Character

“Untrammeled”

“Undeveloped”

“Natural”

“Outstanding opportunities for solitude or a primitive and unconfined type of recreation”

Under the No Action Alternative, the Merrill Pass WCAMs would not be installed and no impact to wilderness values would occur at this site.

The operation and maintenance of the Lake Clark Pass RCO/WCAM would continue. Wilderness naturalness and solitude would be affected by scheduled maintenance activities. As many as three annual helicopter round trips to the facility would have flight paths over designated Wilderness. Helicopter rotor and turbine, noise can be heard over long distances, and could mask natural sounds and diminish the areas solitude. These sounds would be heard along the helicopter’s flight path, as well as at the facility site. The helicopter’s flight path from Anchorage would traverse about 3 miles of park land (wilderness) to reach the Lake Clark Pass site. Helicopter noise could be present over portions of three days annually.

The FAA and/or their contractors would be expected to spend up to eight hours per visit at the site to complete maintenance or upgrade equipment (up to three visits annually). The sights and sounds of personnel, equipment, and helicopters, would be temporary (eight hours) and generally confined to the site.

The effects on wilderness naturalness and solitude from maintenance activities would be temporary in duration, extend beyond the immediate RCO/WCAM Site, and have a negligible impact.

Heritage and Cultural Resources: *Not Applicable*
Maintaining Contrast and Skills: *Not Applicable*
Special Provisions: *Not Applicable*
Safety of Visitors, Personnel, and Contractors: *Not Applicable*
Economic and Time Constraints: *Not Applicable*
Additional Wilderness-specific Comparison Criteria: *Not Applicable*

Alternative B: Install Two WCAM Systems At Merrill Pass And Continue Operations Of Lake Clark RCOWCAM

Description: Under the Preferred Alternative, the NPS would issue a right-of-way permit to the FAA to install, operate, and maintain two WCAM systems at Merrill Pass (Low Site and High Site), and continue the operation and maintenance of the existing RCO/WCAM at Lake Clark Pass.

Merrill Pass

The WCAM system at both sites in Merrill Pass would consist of two or three 30-foot galvanized towers (tower array) and one equipment shed. The tower array is supported on steel frame anchored to a 12-18 inch diameter concrete foundation and several steel piers. There are six guy wires leading to three ground anchors for each of the three towers. Towers support several solar panels, cameras, one wind generator and one 3-foot-diameter V satellite dish. The station would be powered with solar panels and wind-driven generators. The station's electronics and sealed glass mat battery would be housed within a prefabricated fiberglass equipment shelter. The equipment shelter would be elevated approximately three feet off of the ground on the steel frame. A description of the WCAM equipment applicable to each site is provided in Appendix C of the EA.

The FAA anticipates construction crews would need approximately 150 hours to install both WCAMs in Merrill Pass.

Approximately 40 helicopter round trips would be required to install the WCAMs in Merrill Pass (Table 3-2). The frequency of the flights would be greater at the beginning of construction as equipment and supplies are transported to the sites. Later, the number of daily flights would be reduced to one round trip to transport crews to the WCAM sites. Short flights would be required to transport crews between the Low and High Sites.

Helicopter operations would be based out of Anchorage. Helicopters would approach the RCO/WCAM sites from the east to minimize flying time within the park boundary.

Several different helicopter types could be used to transport the crew to the RCO/WCAM sites including: Astar, Bell 206, and Bell 206 Long Ranger. Transporting towers and other equipment to Merrill Pass will likely require helicopters with a heavier lift capability, such as a Bell 212 or 214.

Lake Clark Pass RCOWCAM

The existing RCOWCAM system at Lake Clark consists of four 30-foot galvanized towers (tower array) and one equipment shed. The tower array is supported on steel frame anchored to a 12-18 inch diameter concrete foundation and several steel piers. There are six guy wires leading to three ground anchors for each of the four towers. Towers support several solar panels, cameras, one wind generator and one three foot-diameter V satellite dish. The station is powered with solar panels and a wind-driven generator. The station's electronics and sealed glass mat battery would be housed within a prefabricated fiberglass equipment shelter. The equipment shelter is elevated approximately three feet off of the ground on the steel frame. Antenna and galvanized towers are designed to blend into the surrounding environment as

much as possible. A description of the WCAM/RCO equipment applicable to this site is provided in Appendix C of the EA.

An area measuring approximately 150 feet by 150 feet has been cleared of tall vegetation around the WCAM/RCO tower array and equipment shelter.

Facility fencing, tower security lights or obstruction avoidance lighting for aviation safety are not required for new or existing facilities.

Maintenance of WCAM Systems in Merrill and Lake Clark Passes

These activities would require at least one helicopter round trip per year to each site, however, additional trips may be necessary to repair equipment on an as needed basis. Based on the most recent maintenance records for existing WCAM systems in Alaska, FAA estimates the RCOWCAM sites at Merrill and Lake Clark Passes will require a total of three helicopter round trips annually for maintenance and repairs for each site.

FAA also anticipates maintenance crews would need anywhere from a minimum of eight hours at each site to perform routine maintenance (one trip per year) to a maximum of 24 hours at each site (three trips per year) for unexpected repairs or equipment upgrades.

Length of Service

The length of service for the WCAM systems is difficult to predict. The WCAM systems could be superseded by less obtrusive technology, such as satellites. In the event the WCAM systems become obsolete, the FAA will remove all equipment, structures, and solid waste created by the decommissioning of the site in consultation with the NPS. Any additional mitigation measures will be determined at the time of the action.

Minimum Tool: Helicopters would be the minimum tool necessary for the installation and maintenance of WeatherCam facilities in Lake Clark and Merrill Passes. The use of fixed-wing aircraft or other non-motorized transportation would not be feasible for this project. Existing landing strips for fixed-wing aircraft do not exist at either Lake Clark or Merrill Passes. Both sites are in mountainous, rugged terrain that is distant from any staging areas that would be conducive to non-motorized transport of material and personnel. The large volume of material necessary for the construction of the Merrill Pass WeatherCams could not feasibly be transported on non-motorized travel.

Effects:

Wilderness Character

“Untrammeled”

“Undeveloped”

“Natural”

“Outstanding opportunities for solitude or a primitive and unconfined type of recreation”

Under Alternative B, two WCAMs would be installed in Merrill Pass and the operation and maintenance of the Lake Clark RCO/WCAM would continue.

The naturalness and solitude associated with Merrill Pass would be diminished by the development of two WCAMs. The two facilities would each contain two or three 30-foot-tall galvanized towers, solar panels, and an equipment shelter, and have a footprint of about 60 square feet. Both facilities would be visible in the pass and from the valley. The sight of these facilities in an area devoid of human presence would detract from the area's natural wilderness setting. Facility construction would require about 40 round-trip helicopter flights and about 150 hours of on-site construction. The helicopter's flight path from Anchorage to Merrill Pass would traverse about 14 miles of park land (wilderness). Helicopters likely would fly from Kenibuna Lake on the park's eastern boundary through the Another River valley to Merrill Pass. During this time the sights and sounds of construction activities would diminish wilderness

values. Impacts associated with the facility would be long-term, and would noticeably alter the condition of wilderness values in the Merrill Pass area (minor effect).

The operation and maintenance of the Lake Clark Pass RCO/WCAM and two Merrill Pass WCAMs would affect wilderness values. Wilderness naturalness and solitude would be affected by scheduled maintenance activities. As many as nine helicopter roundtrips to the two sites in Merrill Pass and Lake Clark RCO/WCAM may be required for repair and maintenance annually. The helicopter's flight path from Anchorage would traverse about 3 miles of park land to reach Lake Clark Pass and about 14 mile of park land to reach Merrill Pass. Helicopters produce noise that can be heard over long distances, which could diminish the naturalness and solitude of both areas. These sounds would be heard along the helicopter's flight path, as well as at the facility site. Helicopter noise could be present over portions of nine days annually.

The FAA and/or their contractors would be expected to spend up to eight hours per visit at the site to complete maintenance or upgrade equipment (up to nine visits annually). The sights and sounds of personnel, equipment and helicopters would be temporary (eight hours per visit) and generally confined to the site.

These intrusions on solitude and naturalness from operation and maintenance activities would be temporary in duration, and extend beyond the immediate WCAM sites, but have a negligible impact on wilderness values.

Mitigating measures that could lessen impact to wilderness values include the following.

- Human-caused sounds could be mitigated by limiting construction and maintenance activities to early spring or late fall when visitor use is at a reduced level.
- Human-caused sounds could be mitigated by limiting construction and maintenance activities to early spring or late fall when visitor use is at a reduced level.
- The FAA will provide the NPS with a schedule for equipment maintenance, and notify the park superintendent prior to commencing helicopter operations. Use of helicopters during hunting season in known hunting areas would be avoided.
- Guidelines in the Helicopter Use Policy for LACL will be followed for construction of the Merrill Pass WCAM systems and maintenance of these facilities and Lake Clark RCO/WCAM. In planning flight paths, all feasible measures will be taken to avoid and/or minimize impacts. Sensitive areas, including high public use areas and residential areas will be avoided when feasible. Helicopter altitude and horizontal distances will be maintained according to the park helicopter policy.

Heritage and Cultural Resources: *Not Applicable*

Maintaining Contrast and Skills: *Not Applicable*

Special Provisions: *Not Applicable*

Safety of Visitors, Personnel, and Contractors: *Not Applicable*

Economic and Time Constraints: *Not Applicable*

Additional Wilderness-specific Comparison Criteria: *Not Applicable*

Step 2 Decision: What is the Minimum Activity?

The selected alternative is:

Describe the rationale for selecting this alternative:

Describe any monitoring and reporting requirements:

Please check any Wilderness Act Section 4(c) uses approved in this alternative:

- | | |
|---|--|
| <input type="checkbox"/> mechanical transport | <input type="checkbox"/> landing of aircraft |
| <input type="checkbox"/> motorized equipment | <input type="checkbox"/> temporary road |
| <input type="checkbox"/> motor vehicles | <input type="checkbox"/> structure or installation |
| <input type="checkbox"/> motorboats | |

Be sure to record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

Approvals	Signature	Name	Position	Date
Prepared by:				
Recommended:				
Recommended:				
Approved:				

