

National Park Service
U.S. Department of the Interior

Wrangell-St. Elias National Park and Preserve
Alaska

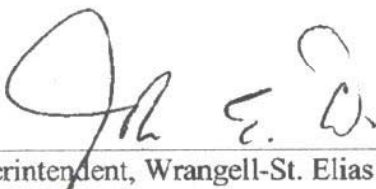


Finding of No Significant Impact

Climate Monitoring Program Expansion

June 2005

Recommended:


Superintendent, Wrangell-St. Elias National Park and Preserve

6/20/05

Date

Approved:


Regional Director, Alaska

6/20/05

Date

FINDING OF NO SIGNIFICANT IMPACT

Climate Monitoring Program Expansion

Wrangell-St. Elias National Park and Preserve, Alaska June 2005

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate an action that would expand the remote automated weather station (RAWS) network at Wrangell-St. Elias National Park and Preserve (WRST). The proposed action would implement a long-term plan for climate monitoring and analysis at WRST; the expanded program would establish additional stations to collect basic climate data including air temperature, precipitation, relative humidity, wind speed and direction, solar radiation, and snow depth.

New RAWS would be established at up to ten locations in WRST. Permanent RAWS would be installed and maintained at four candidate sites along a 200-mile north-south corridor crossing the major ecoregions of WRST. Mobile RAWS would be installed and maintained at up to six locations in WRST outside of the north-south corridor. These unmanned weather stations, consisting of a battery-powered weather instrumentation unit and separate snowfall measurement unit, would become part of the Central Alaska Network climate monitoring system providing baseline weather information and supporting climate trend analysis. Climate is a basic driver of ecological systems. Weather measurements are important for understanding the relationship between climate and ecosystems, and the causes of ecosystem changes.

The NPS has selected Alternative B (NPS preferred alternative), Expand Park Climate Monitoring Program, with mitigation measures. The alternative was not modified during the public comment period.

No changes were made to the EA. One public comment was received during the public comment period that supported the NPS preferred alternative.

ALTERNATIVES

Three alternatives were evaluated in the EA.

Alternative A, No Action

With the no action alternative, no additional RAWS would be established in WRST. The NPS would continue to collect climate data using the five existing RAWS at May Creek, Chisana Town Site, Klawasi, Chititu, and Chicken Airstrip, including the snow courses and aerial markers currently in operation. None of the existing RAWS are in designated wilderness. Each RAWS would be visited 1-2 times a year for annual maintenance during 4 days of the field season. About 4 fixed-wing and 6 helicopter round-trips would be required each year for annual maintenance. Surface disturbance from existing RAWS is about 0.01 acre.

Alternative B, Expand Park Climate Monitoring Program (NPS Preferred Alternative and Environmentally Preferred Alternative)

With the preferred alternative, the NPS would implement an expanded long-term climate monitoring program at WRST that includes:

- Maintaining existing RAWS, snow courses, and aerial markers
- Installing and maintaining four new permanent RAWS along the north-south corridor spanning the WRST ecoregions
- Installing and maintaining up to six mobile RAWS to test climatic variation outside of the north-south corridor and in microclimates
- Additional snowfall measurement equipment

Of the 10 new RAWS that would be established with the preferred alternative, as many as seven would be established in designated wilderness. There would be four new permanent RAWS in wilderness at Gates Glacier, West Fork Tana Knob, Chugach Range nunatak site, and Wrangell Range nunatak site; and 3 new mobile RAWS in wilderness at Jaeger Mesa, Long Glacier, and Notch Airstrip. The existing RAWS at Chititu would be moved to the new Gates Glacier site. See Figure 2-2 Alternative B (NPS Preferred Alternative) from the EA. Total surface disturbance from all 10 new RAWS would be about 0.03 acre.

Each existing and new RAWS would be visited 1-2 times a year for annual maintenance during 6-7 days of the field season. About 6 fixed-wing and 22 helicopter round-trips would be required each year for annual maintenance. Initial installation of the new RAWS and relocation of one existing RAWS would require about 12 additional helicopter round-trips spread over 3 or 4 field seasons.

Alternative C, Limited Expansion of Park Climate Monitoring Program

With Alternative C, the NPS would continue to collect climate data using the five existing RAWS at May Creek, Chisana Town Site, Klawasi, Chititu, and Chicken Airstrip, including the snow courses and aerial markers currently in operation. One new permanent and four new mobile RAWS would be established at Fireweed Mountain, Copper Lake, Ptarmigan Lake, Tebay Cabin, and Cheshnina. None of the existing or new proposed RAWS are in designated wilderness. Total surface disturbance from new RAWS would be about 0.02 acre.

Each existing and new RAWS would be visited 1-2 times a year for annual maintenance during 5-6 days of the field season. About 4 fixed-wing and 16 helicopter round-trips would be required each year for annual maintenance. Initial installation of the new RAWS would require an additional 9 helicopter round-trips spread over 3 or 4 field seasons.

PUBLIC INVOLVEMENT

The EA was released for public review and comment from May 13 to June 13, 2005. The EA was posted on the NPS Planning, Environment, and Public Comment (PEPC) public website. The park issued a press release announcing the availability of the EA and the public comment period on May 13, 2005. The news release was aired by radio stations in Valdez and Glennallen,

Alaska, during the public comment period. A public comment supporting the NPS preferred alternative was received from one individual by electronic mail. No other written comments were received from any government agency, tribal entity, interest group, or individual.

The NPS believes that the conclusions in the EA regarding the environmental effects of the proposed action support its decision to issue this finding of no significant impact.

DECISION

The NPS decision is to select Alternative B, Expand Park Climate Monitoring Program (NPS Preferred Alternative and Environmentally Preferred Alternative) along with the mitigating measures. No modifications of Alternative B were made during or after the public comment period.

MITIGATING MEASURES

The following mitigation measures apply to the selected Alternative B, Expand Park Climate Monitoring Program (NPS Preferred Alternative and Environmentally Preferred Alternative).

Solitude and Naturalness

Guidelines set forth by the Helicopter Use Policy for WRST will be followed, including that the use of helicopters in the Wrangell-St. Elias Wilderness requires a determination by the project manager that it is the minimum tool necessary to accomplish the task. In planning flight paths, all feasible measures will be undertaken to avoid and/or minimize impacts to backcountry users. Sensitive areas, including high public use areas and high resident use areas, will be avoided by aircraft when feasible. Visitors would be notified of the climate monitoring program operations and made aware that they might encounter park helicopter operations in Helicopter altitude and horizontal distances will be maintained according to the park helicopter use policy.

Fixed wing aircraft will be used instead of helicopter to access the RAWs for maintenance at May Creek, Chisana Town Site, and in most instances, Notch Airstrip.

The NPS Inventory and Monitoring Program has taken special consideration to minimize impacts on wilderness values by making the stations as compact as possible. RAWs have a small footprint, low-impact anchoring systems, and are powered year-round with solar panels. They are also equipped with a sealed lead-acid battery enclosed within an insulated cargo container. Where possible, the antenna/tower will be installed in such a way so as not to protrude beyond the silhouette/horizon of the nunatak or ridge. Antenna and towers will be painted with appropriate colors to blend in with each environment.

Visitor Experience

Visitors will be notified of the climate monitoring program and made aware that they might encounter monitoring station equipment or helicopter-supported maintenance operations in the backcountry. Signs would be posted on the weather station equipment explaining its purpose and listing a person to contact if visitors who happen upon the site have any questions. Use of helicopters during hunting season in areas of known hunting would be avoided. When potential conflicts may occur, notification will precede maintenance operations.

Wildlife

To the extent possible, installation and maintenance activities will be timed to avoid sensitive periods, such as nesting season. Aircraft will not fly over wildlife. If animals (e.g., Dall sheep or bears) are observed near the weather station sites, flights will be rerouted or rescheduled in order to avoid or minimize disturbance. No helicopter flights will be made over Dall sheep habitat (above the 4000-foot contour north of the Chitina River) from August 5 through September 20. Maintenance visits requiring aircraft may also be scheduled during winter months when wildlife would be less likely to be present.

In addition to meeting all Federal Aviation Administration and NPS helicopter policy and aircraft requirements, mitigation common to all alternatives for both fixed wing and helicopter flight paths will include:

- Maintenance of a 1,500 foot vertical or horizontal clearance from traditional summer and calving or other habitats supporting reproduction as well as adult animals whenever feasible. This includes brown and black bear, moose, caribou, Dall sheep, and wolves.
- Pilots shall not hover, circle, harass, or pursue wildlife in any way.
- Where feasible, flight paths will avoid known Dall sheep breeding areas from May 15 through June 15.
- A minimum quarter-mile clearance will be maintained from all active bald eagle nests. All nests are considered active from March 1 to May 31. Nests used for nesting activity are considered active through August 31.
- Flight paths will avoid known wilderness users and areas where users are known to concentrate or visit frequently.
- Pilots will not compromise safety.

The climate monitoring sites will be surveyed prior to equipment installation for the presence of rare plant species as designated by the Alaska Natural Heritage Program. Where practicable, all efforts will be taken to mitigate effects on rare plants by impact avoidance.

Although very little vegetation is present at most of the proposed sites, where the surfaces of rocks are covered with lichen, disturbance of those rocks will be minimized. If rocks need to be moved or used to fill gabions, the surface rocks with lichen on them will be carefully set aside and rocks from underneath will be used. Rocks with lichens on them will be left lichen-side up and in their original location when possible. Where other plants are present, care will be taken to minimize disturbance (e.g., stepping on rocks where possible rather than on plants and clearing the minimal amount of vegetation necessary).

Soils

The weather stations will be anchored in such a way to avoid disturbing any soils present. Guy anchors will be driven into the ground between rocks. If necessary, holes no greater than ½ inch in diameter will be drilled into bedrock to facilitate the anchoring of guy lines. Soil compaction will be minimized by walking and setting down supplies on rock rather than on plants and soils.

Measures will be taken to prevent or control accidental spills of oils, lubricants, and other chemicals from contaminating soils. An emergency spill kit, containing absorption pads, absorbent material, shovel or rake, and other cleanup items, will be readily available on-site in the event of an accidental spill.

On sites with developed soils, construction will not be conducted when soils are saturated, such as during or immediately following rain events.

Cultural Resources

Site surveys have indicated no artifacts or other cultural features are present in or near the proposed locations of any of the preferred or other potential climate monitoring sites. If previously unidentified archaeological features are encountered during equipment installation, work will cease immediately and the park superintendent would be notified to ensure protection of cultural resources.

Culturally important viewsheds will be protected to the extent feasible. By positioning the equipment out of line of sight of visitors, NPS will ensure that equipment proposed for installation or for upgrades at sites within the Chisana and Kennicott Historic District will not adversely affect the cultural landscape at these districts.

RATIONALE FOR THE DECISION

The selected alternative will satisfy the purpose and need of the project better than the no action alternative because it provides optimal enhancement of NPS ability to fulfill its inventory and monitoring program mandate, understand park ecosystems, and manage natural resources.

The no action alternative and Alternative C were rejected because these alternatives would impede the ability of the NPS to fulfill its inventory and monitoring program mandate, fully understand park ecosystems, and effectively manage natural resources.

Significance Criteria

The preferred alternative does not conflict with any of the following significance criteria (40 CFR Section 1508.27). Therefore, the preferred alternative will not have a significant effect on the human environment.

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. The EA evaluated the effects of the preferred alternative on wilderness values (solitude, naturalness, and visitor experience), wildlife, vegetation, soils, cultural resources, and park management. There will be negligible, temporary and long-term adverse impacts on solitude; minor, temporary, and long-term adverse effects on naturalness; diminished visitor experience from overhead aircraft noise and encountering RAWS equipment; temporary, localized displacement of wildlife from maintenance and human presence, and negligible, long-term direct adverse impacts on wildlife habitat; negligible, localized, temporary impacts on vegetation and soils from foot traffic, and

negligible, long-term direct impacts on vegetation soils; no impacts on cultural resources; and moderate beneficial impact on park management.

(2) *The degree to which the proposed action affects public health or safety.* The proposed action will not affect public health or safety to any known or appreciable degree either adversely or beneficially.

(3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers, or ecologically critical areas.* Several of the new RAWS are situated in designated wilderness. No known historic resources, cultural resources, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas will be affected.

(4) *The degree to which effects on the quality of the human environment are likely to be highly controversial.* The effects on the quality of the human environment are not likely to be highly controversial. Only one written public comment was received during the 30-day public comment period from an individual who expressed support for the preferred alternative.

(5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The degree or possibility that the effects on the human environment will be highly uncertain or will involve unique or unknown risks is extremely remote.

(6) *The degree to which the action may establish a precedent of future actions with significant effects or represents a decision in principle about a future consideration.* The degree or possibility that the action will establish a precedent of future actions with significant effects or represents a decision in principle about future considerations is extremely remote.

(7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.* The action will enable the NPS to fulfill its inventory and monitoring program mandate, and enhance park management and understanding of park ecosystems. The action is not related to other actions of individual insignificance that will amount to cumulatively significant impacts on the environment.

(8) *Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.* The degree or possibility that the action will cause loss or destruction of known scientific, cultural, or historic resources is extremely remote. The action will actually augment scientific understanding of the relationship between climate and park ecosystems, and resources management.

(9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

There is no known state or federally listed threatened or endangered species at or near the proposed sites.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. The action will not cause a violation of any Federal, State, or local law or requirements for environmental protection.

FINDINGS

The levels of adverse impacts to park resources anticipated from the selected alternative will not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or that are key to the natural or cultural integrity of the park.

The selected alternative complies with the Endangered Species Act, the National Historic Preservation Act, and Executive Orders 11988 and 11990 for floodplains and wetlands. There will be no restriction of subsistence activities as documented by the Alaska National Interest Lands Conservation Act, Title VIII, Section 810(a) Summary Evaluation and Findings.

The NPS has determined that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement is not needed and will not be prepared for this project.