

National Park Service
U.S. Department of the Interior

Lake Clark National Park and Preserve
Alaska



Finding of No Significant Impact

Installation of a Climate Reference Network Station at Port Alsworth

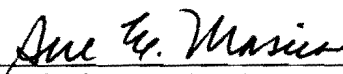
August 2009

Recommended:


Superintendent, Lake Clark National Park and Preserve

8/27/09
Date

Approved:


Regional Director, Alaska

8/31/09
Date

FINDING OF NO SIGNIFICANT IMPACT

Installation of a Climate Reference Network Station at Port Alsworth Lake Clark National Park and Preserve, Alaska August 2009

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate a proposal to issue a right-of-way to the National Oceanic and Atmospheric Administration (NOAA) for the installation of a permanent Climate Reference Network (CRN) Station in Lake Clark National Park and Preserve at Port Alsworth, Alaska.

The NPS has selected Alternative B, the Proposed Action: to install a CRN station with mitigation measures.

One written comment was received on the EA during the 30-day public comment period. The alternative was not modified by public comment. However, two additional mitigation measures were added to respond to concerns about the proliferation of equipment and communication sites in NPS units.

ALTERNATIVES

Two alternatives were evaluated in the EA.

Alternative A, No Action, Environmentally Preferred Action

A Climate Reference Network Station would not be installed at the NPS administrative site at Port Alsworth.

Alternative B, Install a Climate Reference Network Station (Proposed Action)(NPS Preferred Alternative)

The NPS would issue a right-of-way to NOAA for the installation of a CRN station near the Lake Clark National Park and Preserve administrative headquarters at Port Alsworth. The proposed site of the CRN station (N60° 11' 42.66", W154 19' 10.79") is south of the 15 acre administrative headquarters at Port Alsworth. The location is 300 feet south of the "back trail" which follows an old survey line between two NPS parcels. A CRN station is typically composed of three structures: a tower that hosts a suite of sensors, a rain gauge and a battery box. The CRN site may also have solar and wind generating capability and these components can be housed on the sensor tower and with the battery box. CRN sites require a permanently undeveloped 200-foot radius buffer around the instruments, an AC power source, and access for annual maintenance. A 60-foot radius (3,600 ft²) around the towers, instruments and shielding around the rain gauge must be cleared of trees. This area would be designed to appear as a natural clearing.

The instrument tower would be installed on a cement footing measuring 3 feet by 3 feet by 4 feet deep. The rain gauge would be installed on a circular cement footing measuring 2 feet in

diameter and 2 feet deep, within a shield eight feet in diameter. The battery box would be installed on a cement footing measuring 1.5 feet by 1.5 feet by 3 feet deep.

The wind turbine tower would be installed on the instrument tower at about 7.5 meters. The solar panels would be installed with the battery box. All footings would be dug by hand and materials (soils/dirt) removed for footing installations would be scattered outside the installation footprint. A suite of sensors would be placed on the 10 or 30 ft. instrument tower at 4.5 ft. above the surface of the ground. (Note that the cement footing might be interchangeable with a steel frame footing of the same size.)

AC power is available at the "boneyard" of the NPS Field Headquarters, approximately 600 feet away from the proposed CRN installation. The powerline would be threaded through PVC pipe and laid under the moss mat from the power source in the boneyard to the CRN site. The powerline corridor would be 12 to 18 inches wide and approximately 600 feet long (900 ft²). A flap of moss and dwarf shrubs 12 to 18 inches wide and 6 to 8 inches thick would be cut by hand and folded back in sections for the length of the power corridor. The powerline would be laid on the humus layer and the vegetation mat restored to its original position.

About 4 feet of the proposed powerline would be buried where it crosses the "back trail" a barren walking path behind the "boneyard". No vegetation would be removed in this area.

Materials and equipment would be moved to the site by helicopter sling load from the park maintenance facility on the airstrip or via an ORV and trailer. If ORVs are used for access, plywood panels would be laid onto the route from the "back trail" to the site. Plywood would be removed immediately after materials are moved.

PUBLIC INVOLVEMENT

The EA was issued for public review and comment from July 20, 2009 to August 18, 2009. Notice of the EA was sent by mail or email to 50 government agencies, tribal entities, interest groups and individuals. The EA was posted on PEPC and the park's webpage. One written comment was received. Two additional mitigation measures were added to respond to concern about the proliferation of equipment and communication sites in NPS units.

The public comment did not change the conclusions in the EA concerning the environmental effects of the proposed action.

DECISION

The NPS decision is to select Alternative B, Installation of a CRN station at Port Alsworth, Alaska, along with the mitigating measures.

Mitigating Measures

The following mitigation measures were developed based on public comment.

1. Wind generators and solar panels will be installed on the CRN station to test the feasibility of using alternative energy. These structures would be installed on the sensor tower and battery box. If alternative energy is insufficient to power the equipment, an AC powerline will be installed in summer 2010 in accordance with the procedures in the EA.
2. A decommissioned snow gauge in the headquarters facility at Port Alsworth would be removed.

Rationale for the Decision

Alternative B, Install a CRN site in Port Alsworth, Alaska, will satisfy the purpose and need for the project better than the no-action alternative. The National Parks Omnibus Management Act, passed by Congress in 1998, directs the NPS "to establish baseline [resource] information and to provide information on the long-term trends in the condition of National Park System resources." Climate is a fundamental driver of ecological condition and the patterns of plant and animal communities found in NPS park units. Climate Monitoring has also been identified as a Vital Sign of the Southwest Alaska Network, one of 32 networks of the NPS Inventory and Monitoring Program. Installation of a CRN site at Port Alsworth will support NPS directives as established by Congress.

The purpose of USCRN is to provide and maintain future long-term (50-100 year) high-quality observations of temperature and precipitation that can be coupled to past long-term observations for the detection and attribution of climate change and with the ability to meet the stringent data quality and continuity requirements of the climate science community. Reliable observations from the CRN will allow the detection of present and future climate change, and enable scientists to increase our understanding of natural and human-induced effects.

Mitigation measures have been incorporated into Alternative B to reduce the impact to vegetation, reduce the number of structures at the headquarters site, and reduce energy consumption in the headquarters compound.

The environmentally preferred alternative (Alternative A - no-action) was not selected because it would not fulfill the purpose of the project.

Significance Criteria

The selected alternative (Alternative B) will not have a significant effect on the human environment. This conclusion is based on the following examination the significance criteria defined in 40 CFR Section 1508.27.

(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 Alternative B on vegetation, soils, aesthetics and cultural resources. As documented in the EA the effects of the alternative ranged from negligible to minor depending on the resource. There will be no significant restriction of subsistence uses.

(2) The degree to which the proposed action affects public health or safety.

The selected alternative (Alternative B) will not affect public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rives, or ecologically critical areas.

The CRN station would be located in a national park. As documented in the EA the effects of the selected alternative (Alternative B) ranged from negligible to minor depending on the resource.

(4) The degree to which effects on the quality of the human environment are likely to be highly controversial.

The selected alternatives (Alternative B) effect on the quality of the human environment was not controversial. The EA was issued for public review and comment from July 20, 2009 to August 18, 2009. Notice of the EA was sent by mail or email to 50 government agencies, tribal entities, interest groups and individuals. The EA was posted on PEPC and the park's webpage. One written comment was received.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The environmental effects of the selected alternative (Alternative B) do not involve unique or unknown risks.

(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 selected alternative (Alternative B) will not establish a precedent for future actions.

(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.

There are currently four RAWs (Remote Automated Weather Stations) in Lake Clark National Park and Preserve, with a fifth due for deployment in summer 2009. The proposed CRN site is located nearby the Port Alsworth RAWs for long-term calibration. The proposed CRN site would make a total of six weather stations in a park of four million acres. Other installations in Lake Clark include four FAA weathercams, one radio repeater (a second one is outside the park), and 13 facilities for collecting geophysical data about volcanoes, seismic activity and movements of tectonic plates. In addition to scientific data, all of these facilities provide data to ensure human safety and resource protection in and around the park. The cumulative impacts of these sites are described in the EA for the Plate Boundary Observation network (NPS, 2007). Because of the CRN site's small footprint (0.08 acres) and close proximity to the park headquarters area

at Port Alsworth this facility will have negligible cumulative impacts to the park environment. The affected area of 0.08 acres will be a minimal increase to the past and ongoing development activity in the community of Port Alsworth. The removal of a decommissioned snow gauge from the headquarters facility at Port Alsworth will reduce scientific infrastructure in the park.

There will be minimal impacts to the environment from installing a CRN site at Port Alsworth. The level of impacts resulting from the selected alternative would not result in impairment of park resources that fulfill specific purposes identified in the enabling legislation or that are essential to the natural and cultural integrity of the park.

(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 selected alternative will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places.

(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.

The selected alternative will not adversely affect an endangered or threatened species or its habitat.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The selected alternative will not violate any Federal, State, or local law.

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. 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 National Park Service 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.