

Soil Respiration Research

Introduction

Students and professionals have been conducting research projects in the Toolik and Imnaviat area for many years.

Summary

Susan Natali with Woods Hole Research Center proposes to conduct soil respiration measurements for the purpose of analysis and research around Imnaviat Creek Research area from August 8, 2014 through September 30, 2015.

Alternatives Considered

The No Alternative Option is the only alternative considered and was not selected as it would not allow for conducting soil respiration research at Imnaviat Creek Research area.

Decision

I have decided to authorize a permit on public lands for the purpose of conducting soil respiration measurements, analysis and research near Imnaviat Creek Research area from August 8, 2014 through September 30, 2015. See attached terms and conditions that are made a part of the permit.

Management Considerations

The Categorical Exclusion and supporting documentation have been prepared consistent with the requirements of various statutes and regulations, including but not limited to:

- Alaska National Interest Lands Conservation Act of 1980 (ANILCA)
- Federal Land Policy and Management Act of 1976 (FLPMA)
- National Environmental Policy Act of 1969 (NEPA)
- National Historic Preservation Act of 1966 (NHPA)

One BLM land use plan applies to the overall project area, the Utility Corridor Resource Management Plan.

Public Involvement

It was determined that due to the remoteness of the action, there would be no impact to the general public. Additionally, this document was published to the electronic Central Yukon Field Office NEPA Register on June 24, 2014. No comments have been received as of July 14, 2014.

Appeal or Protest Opportunities:

This decision may be appealed to the Interior Board of Land Appeals, Office of Hearings and Appeals, in accordance with 43 CFR Part 4 and DOI Form 1842-1. The notice of appeal must be filed in the Bureau of Land Management Central Yukon Field Office, 1150 University Avenue, Fairbanks, Alaska 99709 within 30 days from receipt of this decision. If you decide to file an appeal, you must carefully follow the procedure described on the enclosed form 1842-1. If you don't file your appeal at the locations specified on the form within 30 days, the Board may dismiss your appeal as untimely without considering its merits. Be sure to send a copy of your notice

of appeal to each party named in this decision and to all of the addresses on the enclosed form 1842-1. You may also ask the Board to stay or suspend the effect of this decision while your appeal is pending. If you desire a stay, you must enclose your request for a stay with your notice of appeal. You have the burden of showing a stay is justified. The Board will grant a stay only if you provide sufficient justification based on the following standards:

1. The relative harm to the parties if the Board grants or denies the stay,
2. The likelihood of the success of your appeal on its merits,
3. The likelihood of immediate and irreparable harm if the Board does not grant the stay, and;
4. Whether the public interest favors granting a stay.

Approval from Authorized Official:

Field Office Manager Decision

Having considered a full range of alternatives, associated impacts, and public and agency input, I have decided to adopt and implement the attached Approved Plan in conformance with the Utility Corridor Resource Management Plan.

/s/ Gary M. Foreman

Signature

for Nichelle W. Jacobson

Field Manager

Central Yukon Field Office

July 15, 2014

Date

Essential Fish Habitat

NEPA Document No.: DOI-BLM-AK-F030-2014-0041-CX

Prepared by: Bob Karlen

Date: 8 July 2014

Essential Fish Habitat (EFH) Finding: There are no salmon species catalogued by the State of Alaska present in the area to be used or impacted by this action. Based on this finding, it is anticipated that the proposed action will not have an adverse effect on EFH for salmon. Therefore, the proposed action is assigned the EFH determination: *No affect*. EFH consultation with NMFS is not required

References: Alaska Department of Fish and Game. 2014. Fish distribution database. Internet website at: <http://www.sf.adfg.state.ak.us>.

Wilderness Characteristics Assessment

NEPA Document No.: DOI-BLM-AK-F030-2014-0041-CX

Serial No.: F-96809

Applicant: Susan Natali with Woods Hole Research Center

Location: Imnaviat Creek Research area, mile post 290 Dalton Highway, more particularly described as Secs. 3 and 4, T. 10 S., R. 12 E., Umiat Meridian, Alaska, containing approximately 5.00 acres.

Prepared by: Karen Deatherage

Date: June 26, 2014

Proposed Action

Susan Natali with Woods Hole Research Center proposes to use public lands near Imnaviat Creek Research area for soil respiration analysis and research from August 8, 2014 through September 30, 2015. She proposes to measure soil respiration using 9 forced diffusion chambers and a plexi-glass chamber over a one week period from August 8-13, 2014. The plexi-glass chamber is only in place during measurements which would be about two minutes. She intends to place three sensors at ridge top, mid-slope and valley bottom. Diffusion chambers would be powered by a 12 volt battery and a 10 watt solar panel (50x25x3 cm). She would measure 10-12 plots up to three times per day. Susan also proposes to place a temperature sensor on top of the ground surface. The sensors are held in place using four small stakes (about 10 cm long and 0.5 cm wide). Moss would be removed from the area and when the sensors are removed, a year later, the moss would be replaced. The temperature sensors are thermocouples, which is a wire that is 0.5 cm in diameter, then is attached to a dowel 1 cm in diameter and inserted into the ground to a depth of 10 cm. Data from the respiration and temperature sensors are recorded and stored on a Campbell Scientific data logger, both the data logger and battery would be housed in a protective enclosure. Access to all sites would be by boardwalk.

Evaluation

The basis for this evaluation is BLM Manual 6310-Conducting Wilderness Characteristics Inventory on BLM Lands, and BLM Manual 6320 - Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process, which direct offices to conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified Lands with Wilderness Characteristics (LWC) in land use plans and when analyzing projects under the National Environmental Policy Act (NEPA).

Effects on wilderness characteristics on BLM lands within the Utility Corridor are evaluated according to the Nonwilderness Assessment, a special project approved by the BLM Director and conducted by the BLM along portions of the Trans-Alaska Pipeline System (TAPS) corridor in 1980. This assessment identified lands under BLM administration that were considered lacking in the wilderness characteristics as defined by the Wilderness Act of 1964. The assessment was conducted in a manner that met the requirements of Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA).

The Dalton Highway and Trans-Alaska Pipeline parallel each other for the entire length of the Utility Corridor. The pipeline is 48” in diameter and elevated above ground for much of its length so it is highly visible. The Dalton Highway supplies Alaska’s arctic oilfields and supports considerable industrial traffic year-round. These man-made features and associated human activities are highly visible and audible depending on topography and proximity. Permitted activities such as gravel- and gold mining occur throughout the area and have expanded in some locations. These developments are substantially noticeable in some areas and alter the natural character of lands in the immediate vicinity.

The action being considered is located within the Sagavanirktok Segment of the Nonwilderness Assessment, which covered approximately 512,000 acres total in 1980. Portions of this segment meet the 5,000 acre minimum size. However it was determined that the Sagavanirktok Segment did not meet the standards for naturalness due to roads, camps, airfields, pipelines, material sites and associated facilities. These disturbances bisect the entire length of the segment.

FINDING

The proposed action will not occur on lands identified as having wilderness characteristics and therefore will not affect wilderness characteristics.

Type of Assessment/Sources

- U.S. Department of Interior, BLM, 1980. Nonwilderness Assessment: The Alaska Natural Gas Transportation System, Final Decision. Anchorage, Alaska
- U.S.G.S. topographic map Philip Smith Mountains C-5; GIS data; Google Earth images

Section 810 Assessment

NEPA Document No.: DOI-BLM-AK-F030-2014-0041-CX

Applicant: Susan Natali with Woods Hole Research Center

Serial No.: F-96809

Proposed Action: Susan Natali with Woods Hole Research Center proposes to use public lands near Imnaviat Creek Research area for soil respiration analysis and research from August 8, 2014 through September 30, 2015. She proposes to measure soil respiration using 9 forced diffusion chambers and a plexi-glass chamber over a one week period from August 8-13, 2014. The plexi-glass chamber is only in place during measurements which would be about two minutes. She intends to place three sensors at ridge top, mid-slope and valley bottom. Diffusion chambers would be powered by a 12 volt battery and a 10 watt solar panel (50x25x3 cm). She would measure 10-12 plots up to three times per day. Susan also proposes to place a temperature sensor on top of the ground surface. The sensors are held in place using four small stakes (about 10 cm long and 0.5 cm wide). Moss would be removed from the area and when the sensors are removed, a year later, the moss would be replaced. The temperature sensors are thermocouples, which is a wire that is 0.5 cm in diameter, then is attached to a dowel 1 cm in diameter and inserted into the ground to a depth of 10 cm. Data from the respiration and temperature sensors are recorded and stored on a Campbell Scientific data logger, both the data logger and battery would be housed in a protective enclosure. Access to all sites would be by boardwalk.

Location: Imnaviat Creek Research area, mile post 290 Dalton Highway.

Township/Range: Secs. 3 and 4, T. 10 S., R. 12 E., Umiat Meridian, Alaska, containing approximately 5.00 acres.

Evaluation by: Erin Julianus and Bob Karlen

Date: 7/7/2014 and 7/8/14

Type of Assessment/Sources:

Effect of the proposal on subsistence uses and needs

Fisheries:

Though there are fish present in the surrounding drainages, no subsistence use of fish is documented for residents of Alaska within the permitted area (USDI BLM 1989). Even if there was fish movement and subsequent subsistence use of fish upstream or downstream from the study sites, the proposed action would not significantly reduce harvestable fisheries resources that are available for subsistence use since this activity will not affect fish or their habitat. The proposed action will not alter the distribution, migration or location of harvestable fisheries resources. The proposed action will not create any legal or physical barriers that would limit access by subsistence users of the fisheries resource.

Wildlife:

The proposed action is located in Game Management Unit (GMU) 26B. Species of wildlife that are used for subsistence harvest in the area include moose, sheep, bears, furbearers, and

small game. These species may temporarily avoid the area when activities and personnel associated with the permitted action are present, but the activity will not permanently impact their distribution in the area. Although subsistence activity occurs throughout the area, the proposed action will not significantly affect subsistence uses and needs.

Other resources:

The proposed activity will not significantly impact other resources such as wood, water, or berries. Subsistence activities that target these resources occur in a much broader area than where the proposed action is to take place. Therefore, the proposed action will not significantly restrict subsistence uses and needs.

Expected reduction, if any, in the availability of resources due to alteration in resource distribution, migration, or location:

The proposed action will not significantly alter the distribution, migration or location of harvestable wildlife resources, nor would it create any legal or physical barriers that would limit subsistence harvest and access.

Expected limitation, if any, in the access of subsistence users resulting from the proposal:

None. Access to resources by subsistence users will not be limited by the proposed action.

Availability of other lands, if any, for the purpose sought to be achieved:

Other public lands are available for the purposes to be achieved. However, the proposed action is a permitted activity on BLM lands in an area that is designated for research activities, and there is no compelling reason to change the site of operation outside of BLM lands.

Other alternatives, if any, which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes:

The only alternative that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes is to not allow or permit any activities that conflict with subsistence uses. However, such an alternative is not viable because the BLM manages public lands for multiple uses.

Findings:

The proposed action will not significantly restrict subsistence uses. Access to subsistence resources will not be hampered by the proposed activity. There is no reasonably foreseeable significant decrease in the abundance of harvestable resources and in the distribution of harvestable resources due to the proposed action

References

USDI Bureau of Land Management. 1989. Utility Corridor Proposed Resource Management Plan and Final Environmental Impact Statement. USDI/Northern Field Office. Fairbanks, Alaska.