United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Central Yukon Field Office
1150 University Avenue
Fairbanks, Alaska 99709-3844
http://www.blm.gov/ak

In Reply Refer To:
FF-096472

CATEGORICAL EXCLUSION / PLAN CONFORMANCE DOCUMENTATION AND DECISION FOR UAF / PATRICK SULLIVAN RESEARCH PERMIT
FF-096472

DOI-BLM-AK-03000-2012-0044-CX

Proposed Action: Issue a permit for research on white spruce trees

Location: SE ¼, Sec. 35, T. 16 S., R. 10 E., Umiat Meridian
Approximately mile 233 Dalton Highway

Applicant: UAF / Patrick Sullivan

Serial Number: FF-096472

Date of Proposed Action: October 1, 2012 through September 30, 2015

Description of Proposed Action:

UAF proposes to perform research on the physiology, growth and reproduction of white spruce trees in the arctic.

The research will involve placement of a weather station tripod containing the following equipment:

- Campbell Scientific CR1000 datalogger (housed in white enclosure)
- CS215 air temperature and relative humidity sensor (housed in white radiation shield)
- LI-190SB photosynthetically active radiation sensor
- Tipping bucket rain gauge (TE525, Texas Electronics)
- Snow depth sensor (SR50A, Campbell Scientific)
- Wind speed and direction sensor (05103, R.M. Young, Traverse City, MI)
- 20W solar panel
- 40W solar panel**
- 100 Ah battery
- Action packer (for sensor leads)

(see Figure 1 following page).

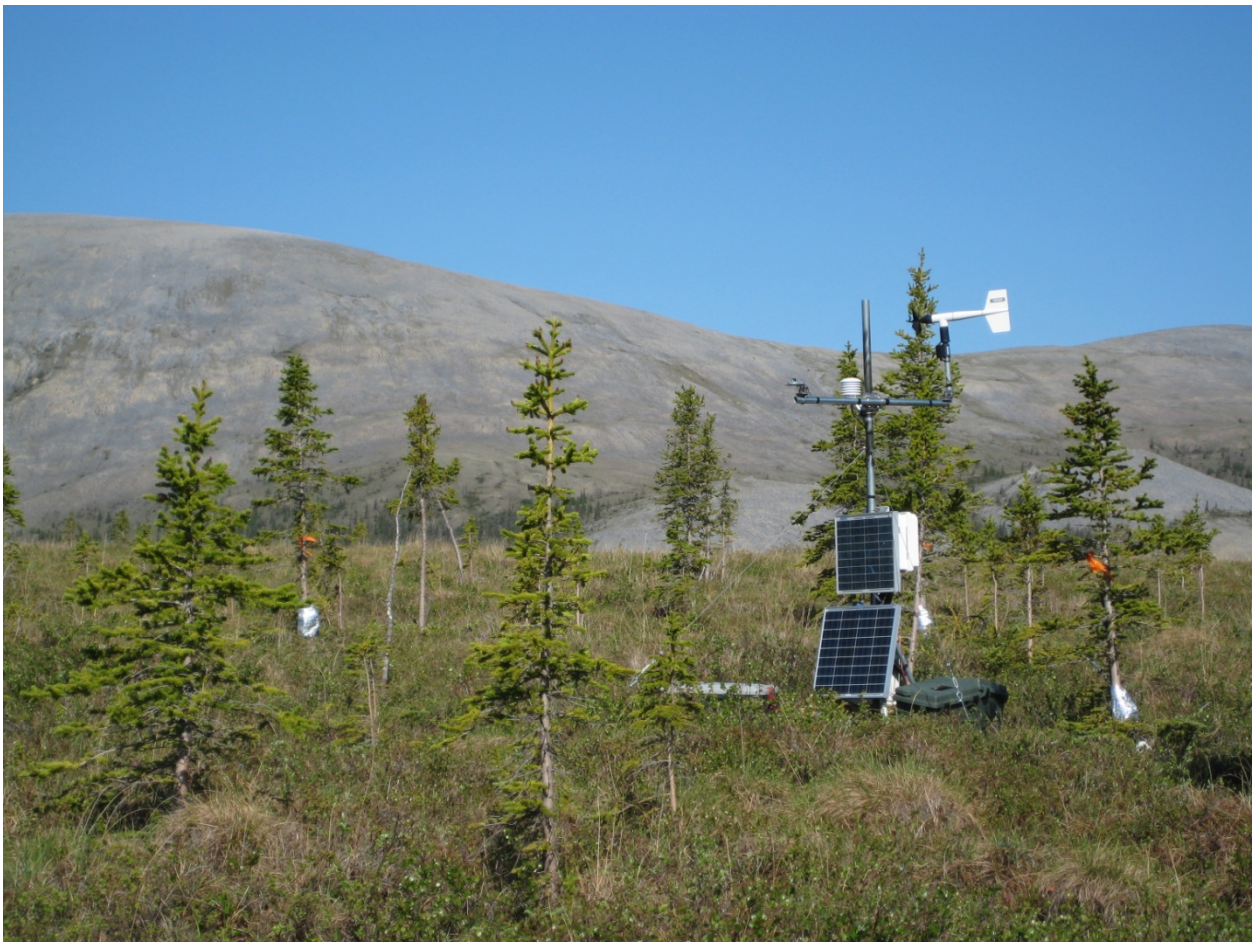
Figure 1

Ten study trees will be selected within seventy feet (70') of the weather station. At each of the 10 study trees, a 2" diameter root observation tube will be installed at a 25° angle from the soil surface. This involves removing a soil core and then replacing the core with a clear acrylic tube. The soil from the cores will be saved and used it to re-fill the holes when the tubes are removed at the end of the study. Only 6" of the tubes will be visible above the soil surface and they will be painted white and capped. Sap flow sensors, which are simply two very small diameter needles that are inserted into the main stem of the tree, would be installed for the summers only, and covered with reflective wrap. Six of the ten study trees will have additional installation of sensors for soil temperature and moisture at the base of the trees, as well as logging band dendrometers which are simply held to the main stem by the tension of the band with no drilling involved. These six trees will also have installed small game cameras during June and July to monitor growth of the branches. Of these installations at the trees, the soil temperature, soil moisture and sap flow sensors have leads that need to be run back to the datalogger(s). Leads will be buried at a depth of about 5 cm to avoid conflicts with wildlife. Exposed leads near the action packer and the dataloggers will be protected using chew-resistant flex tubing.

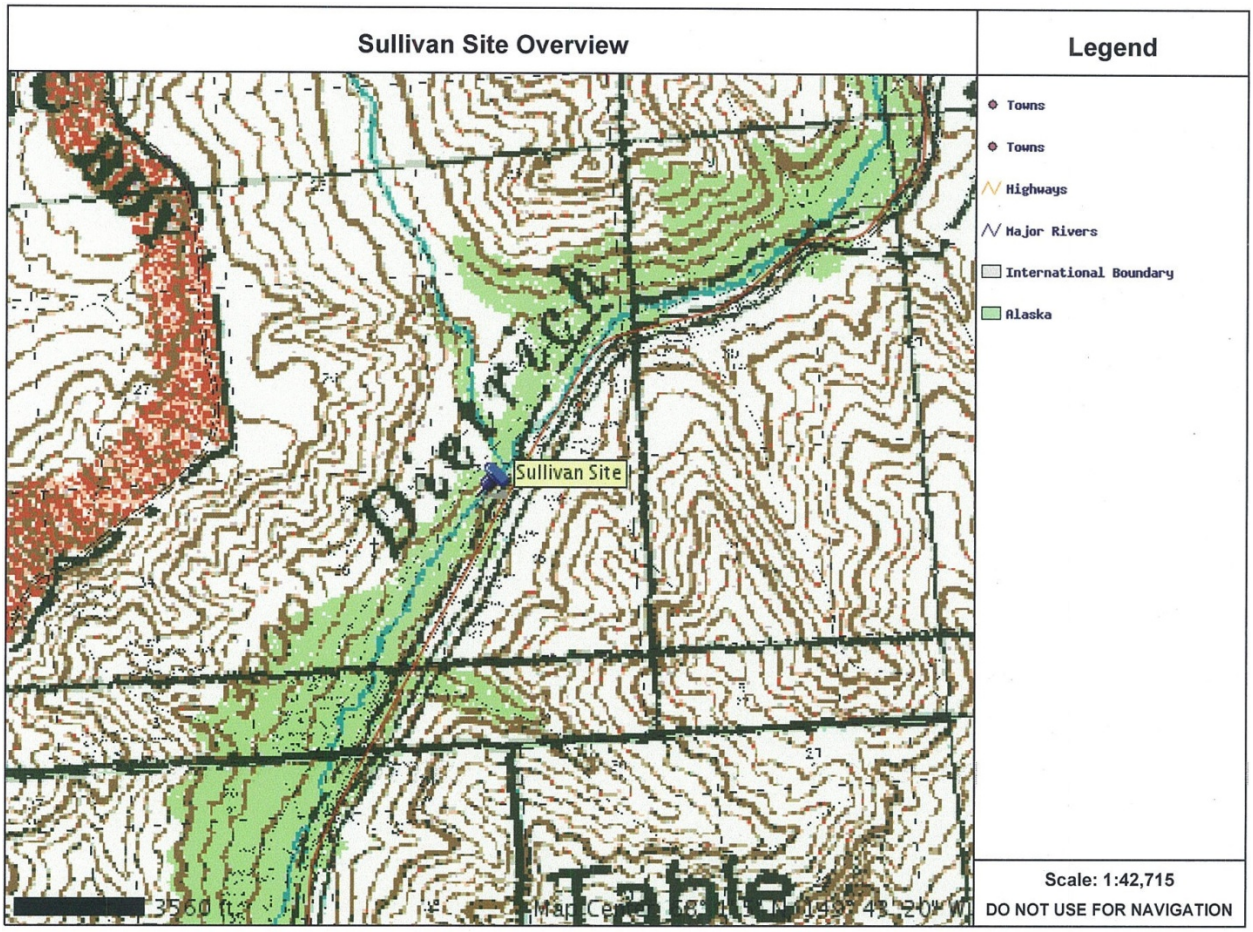

Figure 2

Selected project location is at 68˚01’ 05.01’’N, 149˚43’ 32.32’’W, as shown on the map in Figure 2, above, & Figure 3, next page. Access will be by foot from Pipeline access road F-88485 as shown in Figure 3, which has been authorized and coordinated in advance by the UA Lands office through Alyeska Pipeline Service Company.

Researcher will be at the study site for 12 days per year, lodging overnight at Coldfoot.

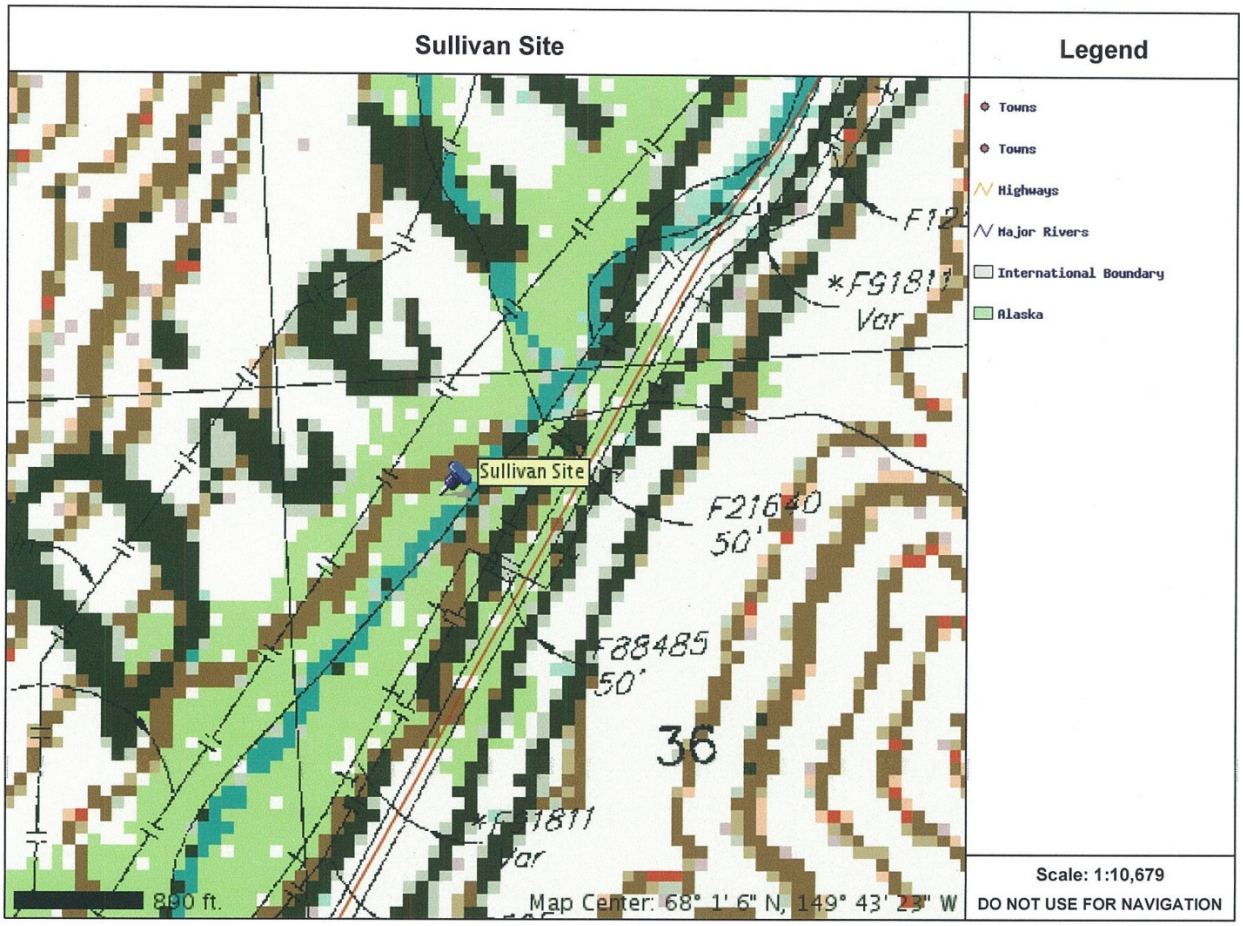

Figure 3

Land Use Plan Conformance

The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP:

Utility Corridor Resource Management Plan Date approved 01/11/91

In Appendix N, Lands and Realty Program Objective 1 states: "provide for, authorize, or restrict the use of public lands in compliance with existing laws, regulations, withdrawals, BLM policy, and consistent with the goals and objectives of this RMP."

Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 2, Appendix 1
1.6 - Nondestructive data collection, inventory (including field, aerial and satellite surveying and mapping), study, research, and monitoring activities.

The proposed action must be screened against the extraordinary circumstances found in 43 CFR 46.215 and listed below. Any "yes" finding requires that an Environmental Assessment or Environmental Impact Statement be prepared for the Proposed Action.

EXTRAORDINARY CIRCUMSTANCES

	YES	NO
1) May have significant impacts on public health or safety.		X
2) May have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.		X
3) May have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources.		X
4) May have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.		X
5) Might establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.		X
6) May have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.		X
7) May have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.		X
8) May have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.		X
9) Might violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.		X
10) May have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).		X
11) Might limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).		X
12) Could contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).		X

Determination

I have determined that the proposed action is in conformance with the Central Yukon Resource Management Plan. I have also determined that the proposed action can be categorically excluded, none of the twelve extraordinary circumstances are triggered, and that an environmental assessment or environmental impact statement is not needed.

_Gary M. Foreman for_____ _9/24/2012_

Nichelle W. Jacobson, Manager Date

Central Yukon Field Office

Decision for Categorical Exclusion DOI-BLM-AK-03000-2012-0044-CX
for UAF / Patrick Sullivan Research Permit

Decision
It is my decision to approve the permit for research as described in the proposed action. A permit will be issued for the period October 1, 2012 through September 30, 2015.

Rationale
There are no anticipated impacts to cultural resources. See Attachment #1.
The Proposed Action will not significantly restrict subsistence uses. See Attachment #2.
No salmon species catalogued by the State of Alaska in the area encompassed by this permit will be impacted. See Attachment #3. The Proposed Action will not impair existing wilderness characteristics. See Attachment #4. The proposed action is expected to have no impact of floodplain or wetland areas. See Attachment #5.

Stipulations
The attached terms and conditions and stipulations will apply to this action.

Appeal Procedures
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 (at the above address) within 30 days from receipt of this decision.

Gary M. Forman Acting for _____ 9/24/2012___
Nichelle W. Jacobson Date
Field Manager
Central Yukon Field Office

Contact Person
For additional information concerning this CX review and decision, contact Peggy Thigpen, Realty Specialist, Central Yukon Field Office, at 907-474-2237.

Terms, Conditions and Stipulations

1. All activities shall be conducted to avoid or minimize disturbance or damage to vegetation, fish, wildlife or subsistence resources.

2. There shall be no additions to this site without the written approval of the Authorized Officer.

3. All equipment used in this project shall be removed from the public lands within 30 days of expiration of this permit.

4. Holder shall observe all Federal, State and local laws and regulations applicable to the premises.

5. Activities shall be conducted in such a manner as to not cause damage or disturbance to any historical or archaeological sites and artifacts. The Antiquities Act (1906), Archaeological Resources Protection Act (1979), Federal Land Policy and Management Act (1976), and general United States property laws and regulations, all prohibit the appropriation, excavation, damage, or destruction of any historic or prehistoric ruin or monument, or any other object of antiquity situated on lands owned or controlled by the United States (16 USC 470; 16 USC 432; 43 U.S. 1733(a); 18 U.S.C. 1361; 18 U.S.C. 641; 43 CFR 8365.1). Such items include both prehistoric stone tools and sites, as well as historic log cabins, remnants of such structures, refuse dumps, and other such features. Should any such site be discovered during the permitted activity, the permittee should avoid impacting such materials, and immediately notify the Authorized Officer.

Fairbanks District Office, Bureau of Land Management

ASSESSMENT OF ARCHAEOLOGICAL AND HISTORIC RESOURCES

Serial Number	FF096472
NEPA Number	DOI-BLM-AK-03000-2012-0044-CX
Applicant	UAF/Patrick Sullivan
Quadrangle	Philip Smith Mountains
Date	9/20/12

Location:
SE ¼, Sec. 35, T. 16 S., R. 10 E., Umiat Meridian , approximately mile 233 Dalton Highway.
68°01' 05.01''N, 149°43' 32.32''W

Description of Proposed Action:
UAF proposes to perform research on the physiology, growth and reproduction of white spruce trees in the arctic.

The research will involve placement of a weather station tripod containing the following equipment:

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Wind speed and direction sensor (05103, R.M. Young, Traverse City, MI)
20W solar panel
40W solar panel**
100 Ah battery
Action packer (for sensor leads)

Ten study trees will be selected within seventy feet (70') of the weather station. At each of the 10 study trees, a 2" diameter root observation tube will be installed at a 25° angle from the soil surface. This involves removing a soil core and then replacing the core with a clear acrylic tube. The soil from the cores will be saved and used it to re-fill the holes when the tubes are removed at the end of the study. Only 6" of the tubes will be visible above the soil surface and they will be painted white and capped. Sap flow sensors, which are simply two very small diameter needles that are inserted into the main stem of the tree, would be installed for the summers only, and covered with reflective wrap. Six of the ten study trees will have additional installation of sensors for soil temperature and moisture at the base of the trees, as well as logging band dendrometers which are simply held to the main stem by the tension of the band with no drilling involved. These six trees will also have installed small game cameras during June and July to

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9/20/12

William H. Hedman, Archeologist
BLM-FDO CYFO

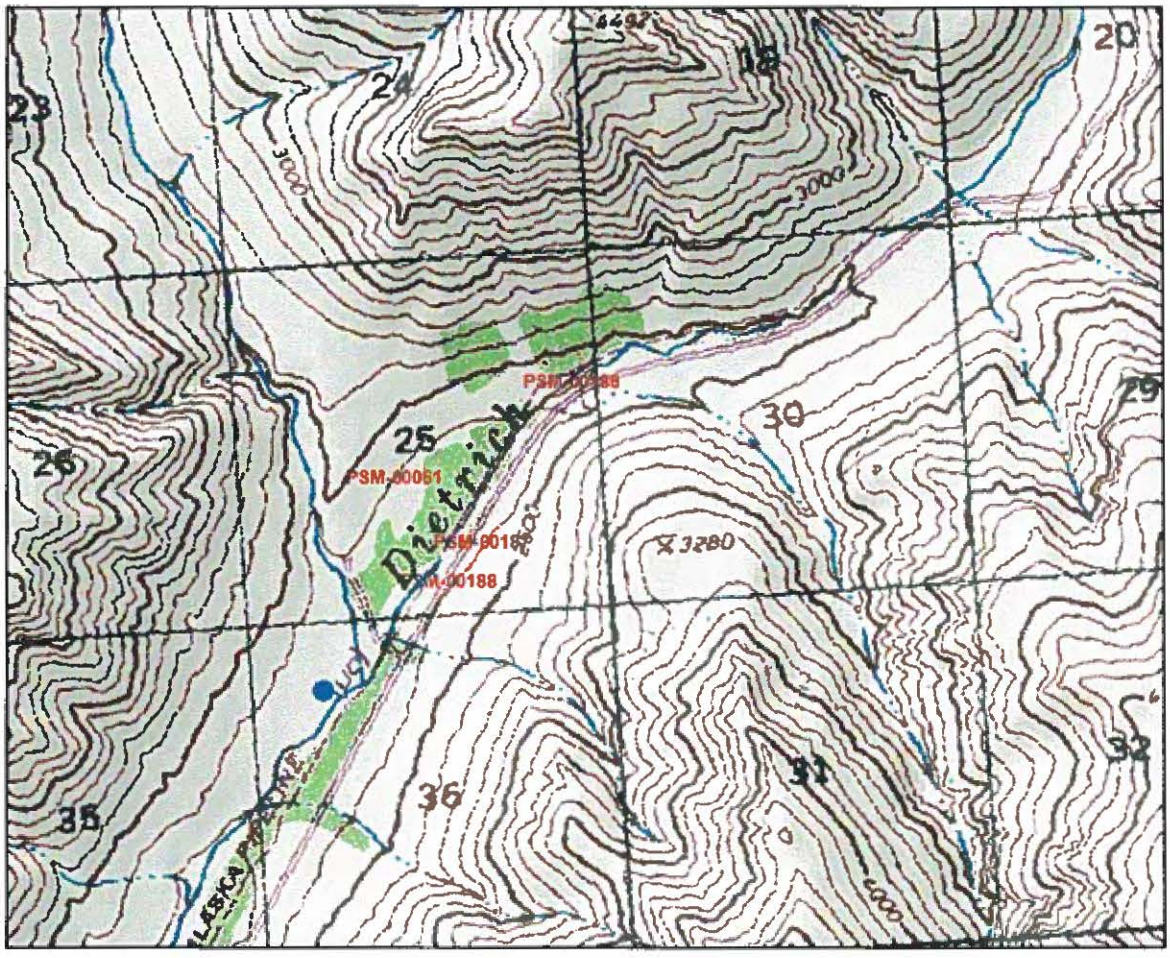

Figure 1. Location of the proposed action along the Dietrich River in the Philip Smith Mountains quad.

Compliance with ANILCA §810

NEPA Document No.: DOI-BLM-AK-03000-2012-0044-CX

Applicant(s): UAF / Patrick Sullivan

Proposed Action: Scientific research.

Location: Approximately mile 233 Dalton Highway

Township/Range: SE ¼, Sec. 35, T. 16 S., R. 10 E., Umiat Meridian

Evaluation by: Merben R. Cebrian and David Esse

Date: 13 September 2012

Type of Assessment / Sources: Review of application materials, subsistence database, local knowledge, and interviews with staff knowledgeable of the area and the proposed action.

Effect of the proposal on subsistence uses and needs:

Fisheries: The proposed action would not significantly reduce harvestable fisheries resources in fish bearing streams within the project area. Though the Dietrich River contains a grayling population, the proposed action is in an upland area and will have no significant impacts on riparian areas which will minimize impacts to water, fish habitat and ultimately fish species. Therefore, the proposed action also would 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 to occur in less than an acre of land on the west side of the Dalton Highway at milepost 233. The research involves a small footprint surrounding a small weather station and some data loggers attached to trees with no significant effects on subsistence resources. There are no significant effects on subsistence uses and needs.

Other resources: The proposed activity will not significantly impact other resources such as berries, willows, and spruce roots. 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: None. There is no expected significant reduction in the availability of resources due to alteration in resource distribution, migration, or location. Moose are highly mobile game resources and will likely avoid the specific area of the mineral pit when human activity is present.

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 lands are available for the purposes sought to be achieved. However, the researcher chose this plot of land due to its relative accessibility from the Dalton Highway.

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.

Finding: 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.

ESSENTIAL FISH HABITAT ASSESSMENT

Applicant: UAF / Patrick Sullivan
Serial No.: FF-096472
CX: DOI-BLM-AK-03000-2012-0044-CX
Location: SE ¼, Sec. 35, T. 16 S., R. 10 E., Umiat Meridian
Approximately mile 233 Dalton Highway
Type of Action: Scientific research
Description of Proposed Action: UAF proposes to perform research on the physiology, growth and reproduction of white spruce trees in the arctic. Ten study trees will be selected within seventy feet (70') of the weather station. At each of the 10 study trees, a 2" diameter root observation tube will be installed at a 25° angle from the soil surface. This involves removing a soil core and then replacing the core with a clear acrylic tube. The soil from the cores will be saved and used it to re-fill the holes when the tubes are removed at the end of the study. Only 6" of the tubes will be visible above the soil surface and they will be painted white and capped. Sap flow sensors, which are simply two very small diameter needles that are inserted into the main stem of the tree, would be installed for the summers only, and covered with reflective wrap. Six of the ten study trees will have additional installation of sensors for soil temperature and moisture at the base of the trees, as well as logging band dendrometers which are simply held to the main stem by the tension of the band with no drilling involved. These six trees will also have installed small game cameras during June and July to monitor growth of the branches. Of these installations at the trees, the soil temperature, soil moisture and sap flow sensors have leads that need to be run back to the datalogger(s). Leads will be buried at a depth of about 5 cm to avoid conflicts with wildlife. Exposed leads near the action packer and the dataloggers will be protected using chew-resistant flex tubing.

For the purposes of this environmental assessment, essential fish habitat means those waters and substrate necessary for salmon for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Act, 16 U.S.C. 1801 et seq). For the purpose of interpreting the definition of essential fish habitat: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by salmon and may include aquatic areas historically used by salmon where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species contribution to a healthy ecosystem; and spawning, breeding, feeding, or growth to maturity covers a species full life cycle.

The National Marine Fisheries Service (NMFS) recognizes fresh waters cataloged as being used by salmon under AS 41.14.870 (*Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes*) as essential fish habitat. No waterbodies in the proposed area fit this criteria (ADF&G 2012). The proposed action is anticipated to have no impact on essential fish habitat.

EFH Finding: No anadromous species are present in the project area so the effects on EFH are expected to be nonexistent in the area encompassed by this permit. Based on this fact, the proposed action is assigned the EFH determination: *will not affect,* and no further EFH consultation is required.

WILDERNESS CHARACTERISTICS ASSESSMENT

DOI-BLM-AK-03000-2012-0044-CX
Issue a permit for research on white spruce trees

FF-096472

Applicant
UAF / Patrick Sullivan

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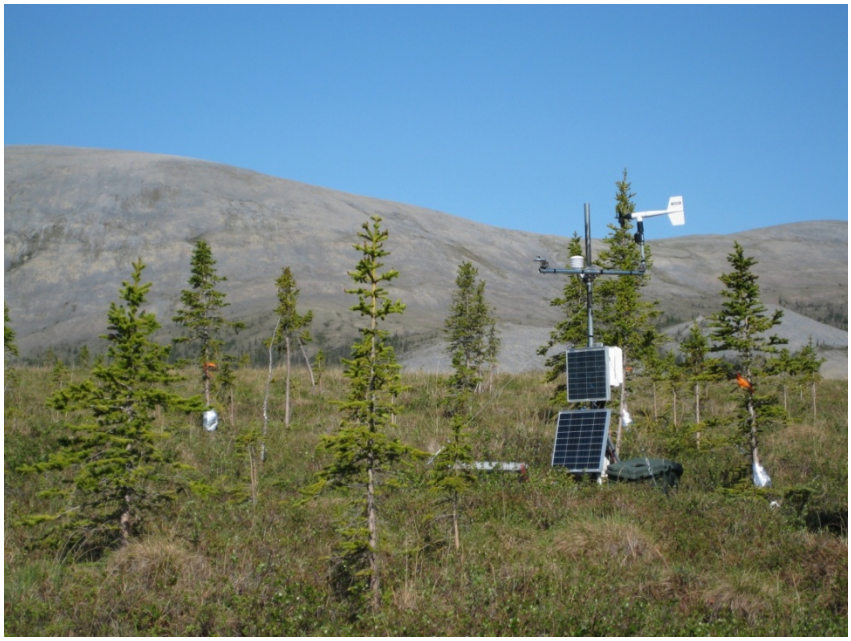
Figure 1. 

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Date of Proposed Action

October 1, 2012 through September 30, 2015

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 in land use plans and when analyzing projects under the National Environmental Policy Act (NEPA).

The 1980 Nonwilderness Assessment was a special project approved by the Director, BLM and conducted by BLM along portions of the trans-Alaska oil pipeline system (TAPS) corridor (U.S. Department of Interior, BLM, 1980). The assessment identified lands under BLM administration that lacked wilderness characteristics as defined in the Wilderness Act of 1964 and was conducted in a manner that met the requirements of Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA).

The action being considered is located within the Atigun Segment of the Nonwilderness Assessment, which covers approximately 223,000 acres. BLM management authority in this segment occurs along the Dalton Highway and extends to the east/west limits of BLM managed land. Portions of this segment meet the 5,000 acre minimum size. The Atigun Segment was deemed as not meeting naturalness standards due to roads, camps, airfields, pipelines, material sites and associated facilities. These disturbances bisect the entire length of the segments.

Type of Assessment/Sources

- U.S. Department of Interior, BLM, 1980. Nonwilderness Assessment: The Alaska Natural Gas Transportation System. Final Decision. Anchorage, Alaska
- Maps: USGS quadrangles, Philip Smith Mountains A-5
- Google Earth, SDMS
- Personal knowledge of the area

FINDING

The proposed action will occur in an area that has been determined not to have wilderness characteristics. More recent observations have confirmed that the 1980 assessment is still valid. In addition, the lands that were determined to be nonwilderness are reserved as a Utility and Transportation Corridor under PLO 5150, so would not be suitable for management as wild lands. The proposed action will not affect wilderness characteristics.

Prepared by: Lisa Shon Jodwalis
Date: 12 September 2012

/s/ David Esse

Date: 9/13/12
Fisheries Biologist
Central Yukon Field Office

References:

Alaska Department of Fish and Game. 2012. Fish Distribution Database. Internet website at: http//www.sf.adfg.state.ak.us/SARR/FishDistrib/PDFListing/int/wisb1.pdf.

Executive Orders 11988 (Floodplains) and 11990 (Wetlands) Conformance Record

Applicant: UAF / Patrick Sullivan
Serial No.: FF-096472
CX: DOI-BLM-AK-03000-2012-0044-CX
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Date: September 13, 2012
Evaluation by: David Esse *Fisheries Biologist*

Procedures to be followed in applying EO 11988 and 11990 are set forth in Part II (p. 17) of the Water Resources Council Guidelines (43 FR 6030, Feb 10, 1978) as adopted in DM 520, Sections 1.5 C. and 1.8.

Step 1: Is the proposed action within the base (100-year) floodplain or wetland area? No

a. Does the proposed action have the potential to result in adverse effects or result in incompatible development which would cause harm to the floodplain or wetland? No.

** If the answer to (1a) is *No* then the proposal is considered as meeting the intent of Executive Orders (11988 and 11990) and therefore no further evaluation is required.

Step 2: Was the public provided notice of the intent to locate the proposed action within a floodplain/wetland?

a. Did the public notice provide adequate information, opportunity for review and comment, and an accounting for the rationale for proposed actions affecting floodplains?
b. Method of Notice:
c. Date of Notice:

Step 3: List the practicable alternatives to be evaluated which would avoid locating the proposed action in the floodplain/wetland.

a. Alternative site(s) must be identified and the practicality of such sites evaluated.

b. Alternative action(s) must be considered before a decision is made to carry out an action in the base floodplain.

c. No action.

Step 4: Identify impacts of the proposed action.

a. Positive and negative impacts:

b. Concentrated and dispersed impacts:

c. Short and long term impacts:

Step 5: Requirements of the Order to minimize, restore, and preserve if the proposed action will result in harm to or within the floodplain/wetland.

a. Minimize. How does the agency propose to reduce harm to the smallest possible degree?

b. Restore. If the proposed site has been previously disturbed due to prior action(s), how does the agency propose to reestablish an environment in which the natural and beneficial floodplain/wetland values can again operate? (*Restore as defined in the WRC Guidelines*).

c. Preserve. How does the agency propose to design or modify the proposed action to assure that it will be carried out in a manner which preserves as much of the natural and beneficial floodplain/wetland values as is possible? (*Preserve as defined in the WRC Guidelines*)

Step 6: Reevaluation of alternatives – having identified the impacts the proposed action would have on the floodplain/wetland (step 4), methods to minimize, and opportunities to

restore and preserve floodplain/wetland values (step 5), determine if the proposed action is feasible at this site.

a. Location within the Base Floodplain. This determination requires that the agency must ascertain that the floodplain site is the only practicable alternative. The importance of locating the proposed action within the floodplain/wetland clearly outweighs the requirements of the Order to: 1) ***avoid direct and indirect support of floodplain/wetland development wherever there is a practicable alternative; 2) reduce the risk of flood loss; 3) minimize the impact of floods on human safety, health and welfare; and 4) restore and preserve the natural and beneficial floodplain/wetland values.***

b. Limit Action. If the proposed action cannot meet the requirements of the EO, then list modifications to the proposed action that would lower the threshold of what constitutes a practicable alternative.

c. No Action Alternative. If neither of the above (a. and b.) courses of action are feasible, the no action alternative should be re-evaluated..

Step 7: If the reevaluation of the proposed action resulted in a determination that there was no practicable alternative to locating in or impacting the floodplain/wetland, a statement of findings and public explanation must be provided for the proposed action. List the statement that was attached to the FONSI for the proposed action. *(see p. 38 WRC Guidelines for elements to be included in the statement of findings and public explanation)

Step 8: Is the proposed action being implemented according to the requirements of EO 11988 and EO 11990?