ENVIRONMENTAL ASSESSMENT

DOI-BLM-AK-03000-2012-0001EA

FF095978

Higgins Overland Move - Linda Creek Trail and Gold Creek Trail

February 2012

Proposed action located in:

T31N., R10W., Secs. 1-3, 9, 12-17
Fairbanks Meridian

Applicant:

Pete B. Higgins
3875 Geist Rd. Ste E-382
Fairbanks, AK 99709

Prepared by:

Central Yukon Field Office
Bureau of Land Management
U.S. Department of Interior
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FREEDOM OF INFORMATION ACT AND RESPONSPENT'S PERSONAL PRIVACY INTERESTS: The Bureau of Land Management is soliciting comments on this Environmental Assessment. Comments, including names and street addresses of respondents, will be available for public review at the above address during regular business hours. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Purpose and Need for the Proposed Action

The BLM proposes to issue a permit to Pete B. Higgins to conduct a winter overland move on the Linda Creek trail to stage equipment on his state mining claim ADL616181, and to permit summer use of the Gold Creek trail and staging area to access the claim.

Decision to be Made

BLM will decide whether to authorize or reject the proposed action. If authorized, the decision will include necessary mitigation to protect the public resources and prevent unnecessary degradation to public lands.

Proposed Action And Alternatives

Proposed Action

Mr. Higgins proposes to use the Linda Creek Trail route to move a Massey Ferguson dozer to his mining claim. Mr. Higgins proposes to use the Gold Creek Trail for summer access and resupply. Travel over the Gold Creek Trail will be via 4-wheelers.

Mr. Higgins also proposes use of the Gold Creek staging area for a period of 2 weeks at a time during the summer months.

No Action Alternative

The BLM would reject the proposal and no permit would be issued.

Conformance With Land Use Plan

Utility Corridor Resource Management Plan Approved 1/11/1991

The proposed action is in conformance with the Utility Corridor RMP, because it is clearly consistent with the following RMP decision(s) (objectives, terms, and conditions):

Appendix N Lands Program Objectives

1. Process applications for land use authorizations from the general public, federal and state agencies, and research organizations on a case-by-case basis.

Affected Environment

1. General Setting

The project location is off the Dalton Highway at approximately Milepost 197-198. These trails are in the Utility Corridor in an area with a high concentration of federal mining claims and are known for accessing state mining claims.

2. Affected Resources

Critical Elements and Other Elements to be Considered						
Critical Elements	Affected			Critical Elements	Affected	
	Yes	No			Yes	No
Air Quality		X		Native American Religious Concerns		X
Areas of Critical Environmental Concern		X		Threatened or Endangered Species		X
Cultural Resources				Hazardous and Solid Wastes		X
Environmental Justice		X		Water Quality- Surface and Ground	X	
Essential Fish Habitat		X		Wetlands/Riparian Zones	X	
Prime and Unique Farm Lands		X		Wild and Scenic Rivers		X
Floodplains	X					
Invasive, Non-native Species	X					
Other Elements	Affected			Other Elements	Affected	
	Yes	No			Yes	No
Access		X		Visual Resources		X
Fire Management		X		Wildlife/Aquatic		X
Mineral Resources		X		Wildlife/Terrestrial		X
Soils	X					
Subsistence	X					
Vegetative Resources		X				

Vegetative Resources:
Vegetation classification surrounding the trails for the proposed action grade from tall scrub/shrub communities interspersed with deciduous trees to predominantly open needleleaf on the hilltops, characterized by scattered, small, black spruce trees (*Picea mariana*) interspersed with low shrubs in the understory. Part of the trail is in the creek and part is through already-established trail.

Invasive, Non-native species:
A vegetation survey was conducted in 2004 within the Dalton Management Area from the Yukon River Bridge to Galbraith Lake. The primary focus was to inventory for non-native invasive plant (NIP) species along the highway, trails and adjacent disturbed sites. Burn areas north of the Yukon River Bridge and south of Coldfoot were visited in 2005 through 2007 to determine impacts of fire on the introduction and spread of NIP. Inventory and monitoring surveys have been conducted from 2008 to present. Twenty-eight non-native plant species were found during these years, three of which, *Vicia cracca* (bird vetch), *Sonchus arvensis* (perennial sowthistle), and *Linaria vulgaris* (yellow toadflax), are considered as noxious weeds by the State of Alaska. Species of greatest concern have been identified by the interagency Alaska Committee for Noxious and Invasive Plants Management (AKEPIC 2005). The following species of greatest concern occur in the Dalton Management Area: *Leucanthemum vulgare* (oxeye daisy), *Tanacetum vulgare* (common tansy), *Melilotus alba* (white sweetclover), *Melilotus officinalis* (yellow sweetclover), *S. arvensis*, *V. cracca*, and *L. vulgaris*. Several of these occur at the staging area, including *M. alba* and *V. cracca*, or within 5 miles of the area, such as *S. arvensis*. *M. alba* occurs at a very high and aggressive rate. No surveys have been conducted at the site of the proposed action but plots at MP 59 and 64.

No surveys for non-native invasive species other than plants have been conducted at the site of the proposed action.

Subsistence Resources:
Subsistence resources in the vicinity of the proposed action are similar to wildlife resources but with more emphasis on big game animals such as moose (*Alces alces*) and Dall sheep (*Ovis dalli*). The proposed routes provide access to these resources for federally-qualified rural residents.

Wildlife/Terrestrial:
Moose, caribou (*Rangifer tarandus)*, Dall sheep, wolves (*Canis lupus)*, black and brown bears (*Ursus americanus and U. arctos*, respectively), furbearers and small game all occur in the general area. While caribou sometimes occur in the area in the winter, moose, wolves, bears, furbearers such as marten (*Martes americana*) and lynx (*Lynx canadensis*) and small game such as snowshoe hare (*Lepus americanus*) and ptarmigan (*Lagopus* sp.) are the most likely to occur along the trails. Both Linda Creek and Gold Creek provide access to game within the vicinity of Poss Mountain and Glacier Lake areas.

Water Quality:
Water quality within the undisturbed portions of Linda and Gold Creek drainage (upstream of any mining and road/trails) is expected to meet State of Alaska water quality standards except during higher flows associated with spring breakup and seasonal storm events. Periodic higher flows associated with spring breakup and seasonal storm events may result in a substantial increase in turbidity in the middle and lower reaches of Gold Creek due to erosion from previously disturbed mining claims and from sediment entering the streams at trail crossings.

Riparian-Wetlands-Floodplains:
The vegetation (including the riparian-wetlands) within the area of the proposed action can generally be described as an open tall scrub community which includes several sub-classifications of low shrub communities (Viereck and others 1992). The scrub shrub communities are intermixed with broadleaf forest types with the upland dominated by open black spruce forest. Riparian canopy vegetation is a mix of *Salix spp.* (willow), and *Alnus spp.* (alder). Some of the more common shrub and herbaceous species of vegetation growing in the riparian-wetland community include: *Betula nana* (Dwarf birch), *Vaccinium vitis-idaea* (Lowbush cranberry), *Vaccinium uliginosum* (Bog blueberry), *Sphagnum sp.* (moss), *Ledum groenlandicum* (Labrador-tea), and grass species.

Portions of the trails and surrounding watershed proposed for use under this permit are classified as wetlands by the U.S Fish and Wildlife Service (U.S. Fish and Wildlife Service 2012). Riparian/wetlands of the Linda and Gold Creek drainages have been affected by past anthropogenic disturbance. Nearby disturbance (includes all habitat types) that has already occurred includes: ~ 33 acres at Gold Creek gravel pit, several small, active mines covering ~ 11 acres in the Gold Creek drainage and ~ 4 acres in the Linda Creek drainage, and disturbance tied to the Dalton Highway and Trans Alaska Pipeline.

Soils:
Detailed soil surveys are not available for the area encompassed by this action. In general, the Brooks Range is an area where frost processes dominate. Permafrost is prevalent and the soils found in this environment are poorly developed. They are shallow, with a thin organic layer, rocky, and poorly drained (Price 1972). Thawing of the permafrost and poor drainage can cause operating areas to be wet, resulting in minimal fugitive dust.

The Gold Creek and Linda Creek trails have been in use for a number of years to provide access to a dozen or so State and Federal mining operations located in nearby drainages. Originally foot trails, these routes were later bladed by miners to provide access by vehicle. While used primarily for winter access, vehicle use over the last 20 years during the summers has resulted in some scarring and erosion in steeper and/or wetter sections of the route.

With the exception of thaw bulbs in the creek bottom, permafrost is generally present throughout the drainage. Surface waters and soils are frozen much of the year resulting in poorly drained soils that remain saturated throughout the vegetative growing season. These growing conditions limit species variability and annual growth.

Environmental Effects

1. Impacts of the Proposed Action

Water Quality/Surface and Ground:
Even though this activity will occur on existing trails, access by any type of vehicle (tracked or wheel) has the potential to cause damage to the integrity of the soil horizons and vegetative mat. The result can be increased erosion and subsequent elevated turbidity levels in the streams. To limit the impacts to water quality from erosion, it is recommended that: blading and removing of the vegetative mat not be allowed, blading of snow during the winter move of the dozer should be limited to removing only the snow necessary to allow safe passage, and summer use of the Gold Creek Trail should cease during breakup or periods when water is flowing on the trail.

Wetlands/Riparian/Floodplains: Functionality of the riparian vegetation (mainly willow-alder) and wetland habitat can be maintained on Linda Creek by limiting the operation to winter months. Use of this trail under conditions other than with adequate freeze down and snow could result in: a direct loss of riparian habitat, disturbance of stream bank cover and/or integrity, and possible loss of wetlands. Protection of these resources will occur if there is at least twelve inches of seasonal frost present. The vegetative cover also can be protected if there is sufficient snow cover to protect the integrity of the vegetative ground cover.

Areas of concern within the floodplain for both the Linda and Gold Creek trails will be the protection of the integrity of the river banks. If snow ramps are utilized at watercourse crossings for bank protection, they should be substantially free of soil and/or debris and be removed at the end of the project.

Other ramps may be needed along the planned course such as when leaving the floodplain or crossing small channels. These also need to consist of snow ramps or bridges, substantially free of soil and/or debris and should be removed at the end of the project.

Soils:
The Gold and Linda Creek trails are highly susceptible to damage during wet conditions. Timeframes for concern include spring snow melt and heavy or prolonged rainfall in the summer or autumn.

Even though this activity will occur on existing trails, access by any type of vehicle (tracked or wheel) over wet ground has the potential to cause damage to the integrity of the soil horizons and vegetative mat. Impacts to soil resources from overland travel include the selected removal of the existing soil profile and a thawing of the permafrost. As the soils thaw, material will flow to low lying areas. Direct impacts to the soils of the area will be the reduction of the thickness of the soils as well as the potential loss (due to runoff) of any soil that may exist along the trail. Indirect effects may include mixing of the soil horizons and a subsequent short-term reduction in the ability of vegetation to obtain nutrients from the soil.

In the past, concerns over impacts to vegetation and soil have resulted in BLM allowing only winter use of the Linda Creek trail. That limitation included ensuring adequate snow cover and frost conditions prior to opening the trail. Those conditions should continue for this permit.

Given that the trails are highly susceptible to damage during wet conditions, it is not possible to establish a set of timing criteria when summer overland travel would be acceptable. Trail impacts can be minimized however by prohibiting use during breakup or periods when water is flowing on the trail, limiting use to the existing trails, and limiting gross weight of vehicles accessing the trails.

Invasive, non-native plants:

Direct effects: Portions of the Dalton Highway are known to be infested with many non-native invasive plant (NIP) species, such as *Melilotus alba, Crepis tectorum* and *Vicia cracca.* If vehicles and equipment are parked in the staging area before snow is deep enough to cover all vegetation, especially seed heads and pods, some seeds will be moved by vehicles from this area along the winter trail. If it is necessary to park vehicles and equipment at the staging area prior to adequate snow cover the area will need to be treated to remove all NIP prior to staging.

NIP, such as white sweetclover, can retain viable seed above snow pack. Seefeldt and Craig (2011 pers comm.) demonstrated that seeds retained by this plant above snow pack can collect in snow and ice on equipment as it moves through an infestation that is not fully covered by snow. Further, they demonstrated that 3% of seed recovered from the equipment germinated in laboratory tests, suggesting that seed picked up at staging areas or along the winter overland route would move with equipment and thereby be introduced to new locations. Viable seed would germinate during the growing season. As long as permit stipulations require adequate snow to cover herbaceous vegetation, any NIP along the route will not be spread by the winter moves.

NIP seeds embedded in mud and other debris on heavy equipment brought from other locations could introduce new NIP to the staging area and along the winter trail. Seeds can dislodge along the way during winter moves and germinate in disturbed areas during the growing season. NIP are pioneer species adapted to poor conditions. With no natural plant pests to keep NIP in control, they can spread rapidly if conditions are suitable.

All equipment, including vehicles and personal gear, should be cleaned at the point of origin to remove all plant material, mud and debris that may harbor seeds. Equipment being moved over the snowpack in the winter should be thoroughly cleaned before freezing temperatures make it difficult to remove mud and debris that may harbor NIP seed. Heavy equipment being transported from Fairbanks, Anchorage, or other road based areas are most likely to carry NIP seeds. Pressure wash and a collection system work best for cleaning heavy equipment and vehicles, such as a commercial vehicle wash a facility that accommodates large equipment. Portable wash stations with collection systems are a viable option. Stiff brushes and/or scraping tools may remove mud from tracks and treads in lieu of a portable wash system; however the undercarriage also harbors mud and debris and would most likely be missed without high

pressure water.

Other non-native invasive species, such as insects, can be harbored as egg masses or cocoons on any equipment. Few non-native and invasive insect and plant pathogen pests are known to occur in interior Alaska currently. Equipment used only in Alaska is less likely to harbor these kinds of pests. Thorough cleaning of equipment and personal gear as described for NIP will also remove egg masses and cocoons and is recommended for equipment and vehicles that are from outside the State.

Indirect effects: If non-native invasive species become established from this action, they are likely to spread along rivers and other natural disturbances and could result in environmental and economic costs, such as control costs or loss of wildlife habitat, depending on the invading species. Spellman (2008) studied impacts of the invasive plant *Melilotus alba* (sweetclover) in early-succession floodplain habitats, including competitive displacement of willow on gravel bars. Since willow is a favored winter browse of moose, implications of some infestations to the subsistence and recreation economy of Alaska could be significant.

Subsistence:
The effects on subsistence resources are fully discussed in the attached ANILCA §810 analysis. There are no significant effects to subsistence uses and needs due to the proposed action.

CUMULATIVE EFFECTS

In addition to the proposed action, there are other active placer mining sites, the Trans- Alaska Pipeline, and the Dalton Highway located in the Gold and Linda Creek watersheds, all of which have altered condition.

Mining is the major past, present, and foreseeable future activity that is likely to impact resources within the Gold and Linda Creek watersheds. Mining has resulted in the alteration of stream channels and an increased sediment input. Use of the trails under this permit will likely add little additional sediment to the streams. Channels and floodplains in the middle reach of Gold Creek have been mined and are in various stages of being reestablished. Vegetation in disturbed areas (mine sites, trails) needs to become established with sufficient density and root mass to stabilize the stream channels and trails. Stable channels and trails, and the return of the riparian/wetland habitat to a proper functioning condition in turn will allow the biological resources to reestablish a presence.

Mitigation Measures

1. Blading of snow during the winter move of the dozer should be limited to removing only the snow necessary to allow safe passage.

2. Use of the Gold Creek Trail is prohibited during breakup or periods when water is flowing on the trail.

3. Use of rubber tired vehicles over 1,500 pounds GVW is prohibited on the Gold Creek Trail without specific prior approval.

4. All operations shall be conducted with due regard for good resource management and in such a manner as not to change the character or course of a stream, block any stream or trail drainage system, or cause the pollution or siltation of any stream or lake.

5. Access is limited to use of the existing trails. No trail widening or travel on undisturbed ground is allowed.
6. Blading and removing the vegetative mat is not allowed.

7. Use of the Linda Creek trail is limited to times of the year when the ground is frozen to a depth of 30 centimeters (12 inches) and there is sufficient snow cover to protect the integrity of the vegetative ground cover. The date when this condition is met varies from year to year based on climatological conditions. To ensure protection of the vegetation and soil, the applicant will contact BLM to verify conditions are suitable prior to using the trail.

   If snow ramps or snow bridges are utilized at watercourse crossings for bank protection, they shall be substantially free of soil and/or debris. This also pertains to other ramps needed along the planned course such as when leaving the floodplain or crossing small channels. Snow ramps or bridges should be removed upon completion of work.

8. The Holder is responsible for familiarizing him/herself and affiliates with the identification of invasive plant species that may occur in the area, particularly the ones listed in this document. The Holder will promptly report to the BLM, the location and extent any invasive plant infestations observed at, or near, the permitted mineral site.

List of Preparers

Bob Karlen
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Bill Hedman
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Joyce Voight

References

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Price, L.W. 1972. *The Periglacial Environment, Permafrost, and Man*. Association of American Geographers, Commission on College Geography. Resource Paper 14. 88 p.

Scott, C. P. 1993. Continuity and Change in the Wiseman area of Alaska. MS thesis, University of Alaska. Fairbanks, Alaska. 268 pp.

U.S Fish and Wildlife Service. 2012. National Wetlands Inventory. Internet website at http://www.fws.gov/wetlands.

Viereck, L.A., C.T. Dyrness, A.R. Batten, and K.J. Wenzlick. 1992. The Alaska vegetation classification. Gen. Tech. Rep. PNW-GTR-286. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 278 pp.

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

Background:

The BLM proposes to issue a permit to Pete B. Higgins to conduct a winter overland move on the Linda Creek trail to stage equipment on his state mining claim ADL616181, and to permit summer use of the Gold Creek trail and staging area to access the claim.

Finding of No Significant Impact:

Mining is the major past, present, and foreseeable future activity that is likely to impact resources within the Gold and Linda Creek watersheds. Mining has resulted in the alteration of stream channels and an increased sediment input. Use of the trails under this permit will likely add little additional sediment to the streams. Channels and floodplains in the middle reach of Gold Creek have been mined and are in various stages of being reestablished. Vegetation in disturbed areas (mine sites, trails) needs to become established with sufficient density and root mass to stabilize the stream channels and trails. Stable channels and trails, and the return of the riparian/wetland habitat to a proper functioning condition in turn will allow the biological resources to reestablish a presence

The applicant will take measures to insure that nonnative invasive species are not introduced or spread due to the summer overland move.

Decision:
It is my decision to authorize Pete Higgins to conduct a winter overland move on the Linda Creek Trail during periods when the ground is frozen and subsequent summer use of the Gold Creek Trail for a period of five years.

The following stipulations shall be followed to protect resources and prevent the possible spread of nonnative invasive.

1. Blading of snow during the winter move of the dozer should be limited to removing only the snow necessary to allow safe passage.

2. Use of the Gold Creek Trail is prohibited during breakup or periods when water is flowing on the trail.

3. Use of rubber tired vehicles over 1,500 pounds GVW is prohibited on the gold Creek Trail without specific prior approval.

4. All operations shall be conducted with due regard for good resource management and in such a manner as not to change the character or course of a stream, block any stream or trail drainage system, or cause the pollution or siltation of any stream or lake.

5. Access is limited to use of the existing trails. No trail widening or travel on undisturbed ground is allowed.
6. Blading and removing the vegetative mat is not allowed.

7. Use of the Linda Creek trail is limited to times of the year when the ground is frozen to a depth of 30 centimeters (12 inches) and there is sufficient snow cover to protect the integrity of the vegetative ground cover. The date when this condition is met varies from year to year based on climatological conditions. To ensure protection of the vegetation and soil, the applicant will contact BLM to verify conditions are suitable prior to using the trail.

   If snow ramps or snow bridges are utilized at watercourse crossings for bank protection, they shall be substantially free of soil and/or debris. This also pertains to other ramps needed along the planned course such as when leaving the floodplain or crossing small channels. Snow ramps or bridges should be removed upon completion of work.

8. The applicant would assure that non-native invasive species are not introduced or spread due to staging, summer, or winter overland travel. The best practices are to clean all equipment at site of origin before moving to staging areas and along the authorized route and avoid staging areas known to be infested with NIP. If staging must occur in areas with infestations of NIP, the authorizing officer will determine actions to be taken by the applicant to remove NIP from the area.

9. Transfer of POLs to equipment shall be completed in a secure manner to minimize the possibility of contamination to the surrounding environment. At a minimum POL type absorbent pads shall be placed under the location to catch overflow or assist the operator in containing a spill, if one occurs. In the case where refueling cannot be avoided within 100 feet of a water body the permittee must use extreme caution while refueling to ensure no release of POLs to the water body. Equipment that has been identified as having a fluid leak should have a drip basin under the leak area to ensure no release to the surrounding environment.

10. All spills shall be contained and cleaned up as soon as the release has been identified. The release of POLs to any water body is to be reported to the Alaska Department of Environmental Conservation (ADEC) as soon as the person has knowledge of the release. (in Fairbanks 457-2121 or 1-800-478-9300 outside normal business hours) A written report may be required by the ADEC within 15 days after the discharge or release.(refer to 18 AAC 75.300 for further guidance) Within 48 hours of a spill on public lands the permittee shall contact the Authorized Officer, Shelly Jacobson (907-474-2356) or Rebecca Hile (907-474-2371)

11. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the Permittee, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The Permittee shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be

made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Permittee will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Permittee.

12. The applicant is required to obtain all applicable federal and State permits prior to commencement of operation, and comply with all pertinent federal and State laws including, but not limited to, air and water quality standards and regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (43 U.S.C. 6901 et. seq.) for disposal of solid waste.

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 occur in an area that does not have wilderness characteristics. See Attachment #4.

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 Eastern Interior Field Office (at the above address) within 30 days from receipt of this decision.

/s/ Tim Hammond, Acting for
Nichelle W. Jacobson
Field Manager
Central Yukon Field Office

3/1/2012
Date

Contact Person
For additional information concerning this EA review and decision, contact Joyce Voight, Realty Specialist, Central Yukon Field Office, at 907-474-2247.