



US Army Corps
of Engineers
Alaska District

Public Notice of Application for Permit

Regulatory Division (1145)
CEPOA-RD
Post Office Box 6898
JBER, Alaska 99506-0898

PUBLIC NOTICE DATE:	February 6, 2014
EXPIRATION DATE:	February 21, 2014
REFERENCE NUMBER:	POA-2012-328
WATERWAY:	Copper River

*****PUBLIC NOTICE REVISION*****

On January 15, 2014, the Alaska District Corps of Engineers published a Public Notice for Department of the Army (DA) permit number POA-2012-328, Copper River for a DA permit application from the Department of the Interior – National Park and Preserve Alaska Regional Office, to make repairs to and realign the Copper Lake Trail. The project site is located within Sections 1 of, T. 7 N., R. 8 E., Sections 25 and 36 of T. 8 N., R. 8 E., Sections 6, 7, 18, 19, and 30 of T. 9 N., R. 10 E., Sections 10, 11, 14, 23, 25, 26, and 36 of T. 9 N., R. 9 E., Copper River Meridian; USGS Quad Map Nabesna B-6; Latitude 62.5816° N., Longitude 143.6964° W.; Copper Lake Trail (MP 20 Nabesna Road), near Slana, Alaska.

The original public notice explained that the proposed project would impact up to 10.4 acres of wetlands and 0.1-acre of waterways. Since this time, the applicant has recalculated impacts and determined that the proposed project would actually impact up to 14.8 acres of wetlands and 0.2-acre of waterways. Attached to this notice is a clarified description of methods that would be used for the trail repair and the acreage of impacts in which each method would result. Project drawings included with the original public notice still apply.

All other information contained in the previous notice remains the same. Please bring this announcement to the attention of anyone you know who is or may be interested. Please contact Roberta Budnik at (907) 753-2785, toll free from within Alaska at (800) 478-2712, by fax at (907) 753-5567, or by email at roberta.k.budnik@usace.army.mil if further information is desired concerning this notice.

District Engineer
U.S. Army, Corps of Engineers

Wetland disturbance estimates for Copper Lake trail (from Wetlands Statement of Findings)

The following describes in detail the prescribed trail improvement methods and estimated acres of wetland disturbance associated with each:

1. Do Nothing: Utilized in areas where very little will be done to the existing or proposed trail locations. At minimum little to no brushing would be necessary, some minor drainage structures would be installed and route assurance markers would be placed. This prescription traverses 15,442 feet of open black spruce (F5), open white/black spruce (F6), woodland black spruce (F8), and woodland black/white spruce (F9) wetland types. Doing nothing implies a durable trail tread and a trail that allows adequate drainage. Wetland impacts consist of vegetation removal to maintain a trail tread. This approach would include dozing along the trail, knocking the center hump off, and leveling the high spots into the low spots. At an estimated disturbance width of 8', this prescription area will impact a total of 2.8 acres of wetlands but will have minimal impact on wetland function.
2. Ditch and Elevate: Vegetation would be removed. An excavator would be utilized to excavate native soil on either side of the trail tread and place on the existing tread area thereby elevating the tread to allow for drainage. Utilize a trail dozer or excavator to spread excavated material. Once native soil has drained sufficiently it would be compacted to support vehicles. This prescription will be utilized in a flat portion on the "border" between open white/black spruce (F6) and mixed shrub sedge-tussock bog (S16) and traverses 1,764 feet. Impacts to wetlands include vegetation removal over a 20' disturbance width, soil compaction over the 8' tread width, and an elevated and compacted surface, preventing any cross drainage. Drainage is provided off the trail tread by the parallel ditches. This prescription will impact a total of 0.8 acres of wetlands.
3. Sidehill, sidecast, and compact: Utilized in locations where sidehill conditions exist, where drainage (breaks in grade) can be located while being constructed. Heavy brushing and tree removal will required before construction can commence. Cuts will consist of full bench cuts with fill being sidecast and compacted on outside of trail sub-base. Outside compacted vegetated edge will provide for runoff filtering of exposed tread and cutslopes greatly reducing erosion. Exposed tread will be compacted with sheep's foot roller attached to trail dozer. This prescription is utilized on sideslopes, mostly within the open white/black spruce wetland type (F6), and traverses 17,064 feet. Disturbance consists of full bench construction consisting of sidehill excavation and deposition of material on the outside edge of the trail tread. This results in vegetation clearing and ground disturbance over a 10 – 20' width, depending on the degree of sideslope. Cross drainage is provided through rolling grade dips and outslope on the constructed trail tread. This prescription will impact a total of 5.8 acres of wetlands.
4. Geo-trak installation: Utilized in areas where wet/soft soil conditions exist. Vegetation is only removed where cross braces will be imbedded to keep the trail tread dry. The geo-track consists of two sections of geo-block grids screwed together with a synthetic wood brace located at junctions. The grids are laid length-wise with 24" between the grids (see Photo 1). This prescription is generally used to cross wetter scrub-shrub wetland types such as open mixed shrub sedge-tussock bogs (S16), and traverses 3,361 feet. Disturbance is minimal, with removal of surface vegetation only to accommodate the cross braces. The open nature of the geo-block

grid allows vegetation to grow through and cross drainage is provided by the geo-block grids being slightly elevated above ground level on the cross braces. The trail would be dozed smooth before geo-track installation. Estimated impact would be 0.46 acres.

5. Geo-block with gravel: Same as described for geo-track, except the installation consists of solid geo-block (three grids laid sideways for additional flotation). This prescription includes overcapping with gravel to reduce degradation of the Geo-block. Approximately 4 to 6" of gravel will be placed on the geo-block and compacted. This prescription is only utilized for crossing short sections of open mixed shrub sedge-tussock bog (S16) and is prescribed for 323 feet. Because of the gravel capping, cross-drainage is limited. This prescription would result in an impact to 0.06 acres of wetland.

6. Trail tread grinding: To be utilized in areas where ground conditions warrant minimal ground disturbance by grinding and blending existing vegetation, mineral soil and gravels to establish a very distinct trail tread without removing ground cover and creating an incised tread. This method is only used where underlying soils contain enough gravel to create a durable trail tread. This method is mostly used in open white/black spruce wetlands (F6) and traverses 14,498 feet. Impact consists of vegetation clearing and mulching for an 8' width. Because of the gravel-at-depth, trail tread will remain durable, with no subsidence or incision. Cross drainage is maintained and impacts to wetland function are minimal. Total impact is estimated at 2.7 acres.

7. Combination of sidehill (see #3) and trail tread grinding (see #6). This prescription is called for on 4,496 feet of trail through open white/black spruce (F6) and woodland black spruce (F8) wetland types. Impacts to wetlands are the same as described under above under #3. Total estimated impact is 1.5 acres.

8. Drainage structure: This is used in either a spot or lateral application. This method is used where mud/muck holes exist because water is held in an incised trail location. This generally occurs in flat areas where no opportunity for drainage exists. The addition of catchments adjacent to the trail tread has been very successful in reducing the impact to the trail tread. The catchment is sized accordingly to remove/store the water from most rain events away from the trail tread. Average size varies from 6'W x 16'L x 4'D on either side of the trail. Material from the excavation will be utilized as borrow to raise the trail tread to direct water flow. These drainage structures are planned at five different locations in woodland black spruce (F8) and open white/black spruce wetland types. Impacts to wetlands include vegetation removal, excavation and displacement of soils, and alteration of drainage patterns. Total impact is estimated at 0.02 acres.

9. Arched culverts: Utilized in areas where water is flowing and drainage is required. Arched culverts replace conventional corrugated metal pipe culverts that are traditionally used. Arched culverts are not affected by freeze-thaw conditions. Arched culverts are made of light weight polymers in segmented sections of 7.5 feet so they can be of any length. They are light weight, easy to install and they require no disturbance of the water course. A 6" cap of native surface would be covered with a tensor grid for added strength and an overcap of gravel (4 – 6" in depth). Arched culverts are prescribed where the trail re-route crosses side drainages at four different locations. Disturbance is limited to excavation of material needed to cover the culverts, some of which may be taken from the drainage structures described above. Arched culverts allow cross drainage. Impact to wetlands from installation is estimated at less than 0.02 acres.

10. Rock crossings: These are utilized in areas where ephemeral water courses exist. A hardened crossing can be established where the bottom of the crossing has a base of rock or gravels able to support sustained use. A suitable site will first be cleared of organic material and a row of large rock will be placed downstream to define the route. Then a layer of rock (10" to 12" diameter) will be placed first with successive layers of smaller diameter rock. Three of these crossings are prescribed. Impacts include potential excavation of suitable material from the adjacent area and some alteration of the existing stream course. Impact to wetlands from installation is estimated at less than 0.01 acres.

Total impact to wetlands from the improvement of the Copper Lake trail would be 14.2 acres. Because the impacted area would be maintained as part of the trail tread or associated drainage control, this constitutes a permanent loss of wetlands and wetland function including erosion control and sediment stabilization; nutrient cycling and carbon/detrital export; and wildlife habitat.