CORPS GP PACKET- ATTACHMENT 1 APMA # _____

WETLAND JURISDICTIONAL DETERMINATION

A Wetland Jurisdictional Determination (Wetland JD) determines if a USACE "404" permit is required. A JD is required every 5 years, or, when a new area is impacted. Certain information is required. Please submit Wetland JD information with brand new APMAs and renewed Multi-Year APMAs.

1. As a service, the Corps will conduct an offsite Wetland JD when you provide a photo of your operation **(a)** and answer a few other questions **(b.)**

   a. **Photograph of your operation, with outline showing all activity and facility locations for the next five years. Photos must be clear, readable, and reproducible.** Sources of photos include (Please check)

   [ ] Aerial photos from your land manager, from a website or other source, showing the footprint of your operation.

   [ ] Photos taken by you. On a map, mark locations of where you took photos. Please provide all of the following:

   [ ] vegetation on and around your operation

   [ ] soil profile (from a bucket or shovel cut), Include an object for scale.

   [ ] creek and riparian area (if within your plan of operation)

   [ ] photos taken from top of hill or other high location to get an aerial view

   [ ] general photos of your operation

   b. **Other Questions - Do you have: (check all that apply):**

   Vegetation: [ ] black spruce [ ] shrubs [ ] tussocks [ ] muskeg [ ] Other

   Non-pay Overburden: [ ] None [ ] Gravel ____ feet [ ] Organic material____feet

   Hydrology - Do you have:

   [ ] ponds that have naturalized

   [ ] other areas with saturated soil, or standing water

   [ ] frozen ground (permafrost soils)

   How much of your proposed operation area has been previously mined? _____ Acres

   What is the total size of your operation (including new areas)? _____ Acres

   How many acres are black spruce, muskeg, frozen ground, etc.? _____ Acres

   How many acres do you think are uplands?_____ Acres

2. **Hire a wetland consultant to do a JD for you.**

3. **Operators working in uplands do not need a Corps permit.** Uplands include areas such as old tailings or other well drained areas. As a service, Corps will supply letters stating that 'No Permit is Required' to operators who supply photos of their operations in uplands.

Applicant
or Agent: _____

Print Name Signature Date

Applicant Proposed Mitigation Statement

Your mitigation statement contains three (3) parts:
Avoidance, Minimization, and Compensatory Mitigation

1. **Avoidance**: Please describe how you will avoid impacts to waters of the U.S. (streams and wetlands). ***Mark all that apply. Use another page if needed:***

- **Roads:**
  - use existing roads
  - construct in uplands
  - use winter access
  - one (1) road, not multiple, through wetlands
- **Streams:**
  - avoid crossing during rain or flood events
  - leave riparian buffer along streams
  - use bridges across streams where possible
  - avoid stream diversions where practicable

Other Avoidance Measures:

- **Design of mine operation:**
  - establish camp, storage and processing areas in uplands
  - mine only pre-drilled, economic ground
  - avoid working in wetlands where practicable
  - locate stockpiles/pads/tailings away from streams
  - place stockpiles in uplands
  - stabilize/ protect stockpiles to avoid erosion, sedimentation

2. **Minimization:** Describe how you will minimize impacts to waters of the U.S. (streams and wetlands). ***Mark all that apply. Use another page if needed:***

- **Before mining:**
  - plan flow of material – how many CY to be moved & where will it go
- **Exploration:**
  - drill in winter using track vehicles
  - utilize drill holes instead of trenches
  - use platforms instead of fill pads for drilling
  - dispose of drill mud into a containment sump
- **Design of mine operation:**
  - limit advance stripping to what can be mined in one season
  - salvage or create areas to grow shrubs, for reclamation
  - settling pond designs: capacity calculation, at least two feet of freeboard, overflow spillway or infiltration ditch
  - stack stockpiles higher to minimize footprint in wetlands

Other Minimization Measures:

- **Roads:**
  - use geo-textile material for roads and drill pads
  - limit road footprint through wetlands
  - use correctly sized culverts where needed
- **Streams:**
  - use one (1) crossing or access road, not multiple
  - construct a floodplain or flood prone area to reclaim your diversion
  - grade to match up & down-stream gradient
  - minimize depth to minimize water table drop
- **Reclamation**
  - Implement concurrent reclamation
  - Use vegetation that has been salvaged or grown on-site

-PLEASE COMPLETE SECOND PAGE-

3. **Compensatory Mitigation:** ***Please check how you will mitigate to meet the 2008 Compensatory Mitigation Rule***

____ **Option A – Permittee Responsible Mitigation for the Alaska Miner:**

- This requires additional information from you. Please fill out the Permittee Responsible Mitigation Plan for the Alaska Miner (Corps GP Packet, Attachment 3)
- This requires your commitment to approved reclamation actions.

–OR–

____ ***Option B – Purchase of credits from a Mitigation Bank or In-Lieu Fee Program:***

- Fee is based on the acreage and type of waters of the U.S. (wetlands and streams) affected by your operation. If available, you may select a Mitigation Bank or an In-Lieu Fee Program. The Corps must approve your proposal, but has no input into the cost of the credits.
- Mitigation Banks and In-lieu Fee Mitigation Programs have already completed the mitigation plan process. Once the fee is paid, the Bank or In Lieu Fee Sponsor assumes all responsibility for the mitigation. The difference between the two is that Mitigation Bank Sites are selected and approved in advance, while In-Lieu Fee Sites are purchased with the fees received from permittees after-the-fact.
- Please reference the Mining Link on the Corps website to see if there are any Mitigation Banks or In Lieu Fee programs available for your location at this time.

_____

Applicant Signature ***Date***

Permittee Responsible Mitigation Plan for the Alaska Miner:

Table of Contents

1. Baseline Information: *Please describe your proposed compensatory mitigation site.*

a. Site information: *(Have you included these? Mark all that apply)*

[ ] Location map(s)
- [ ] general location in the valley/watershed
- [ ] specific location along the creek/from the creek

[ ] Plan Maps showing all activity and facility locations
- [ ] location of the creek in reference to your operation
- [ ] existing operation
- [ ] future operation (where will your Multi-year APMA expand)
- [ ] camp location
- [ ] pad locations (storage, processing areas, etc)
- [ ] settling ponds
- [ ] stockpile locations

[ ] Photos for a Wetland JD
- [ ] Aerial photos
- [ ] site photos of stream
- [ ] vegetation photos of the following locations:
  - [ ] proposed roads
  - [ ] proposed camps
  - [ ] future expansion area of your operation

[ ] Information about known historic mining disturbance
- [ ] map showing where this disturbance is in compared with your current and future operation area
- [ ] other information:

b. Streambank information:

1) At your mine, have you disturbed, or will you be disturbing the streambank?
[ ] Yes [ ] No
2) If yes, please describe: mine access road, water access road, vegetation clearing etc:

3) Dimensions of disturbance(s):

c. Stream by-pass or diversion information:

1) At your mine, have you constructed, or will you be constructing a stream by-pass or diversion? [ ] Yes [ ] No

2) If yes, how long has this by-pass or diversion been in place?

3) If yes, how long do you intend to use the by-pass or diversion?

4) Dimensions of by-pass or diversion:

5) Fish Status (salmon, grayling, no fish, no fish sampled - consult ADFG):

6) Are there identified spawning, rearing or migration areas for fish in the stream?

Describe:

2. Mitigation Work Plan

Please describe how you will satisfy permittee-responsible mitigation for your operation. Miners decide which mitigation options will work best for his/her operation. Apply your knowledge of site-specific conditions, taking into account:

- *Location in the watershed: Upper headwaters, mid-reach, lower reach*
- *Valley width*
- *Previous mining impacts*
- *Permafrost conditions*
- *Regional growing seasons and recovery rates*
- *Availability of equipment*

Overall Mitigation goals:

- *Accomplished by miners, on or nearby your mine claims*
- *Use materials and other resources that are at or nearby your mine claims*
- *Based on where your impacts are located, choose mitigation options to satisfy your compensatory mitigation requirements. There are three zones:*
    1. *Impacts to wetlands greater than 50 feet from the stream*
    2. *Impacts to wetlands within 50 feet of the stream, including the stream bank*
    3. *Impacts to the stream*
- *Reclamation activities that improve function of the aquatic environment*
    - *Wetlands*
        - *Reclaim to improve "surface water runoff management" at your site*
        - *Reclaim to improve "habitat" function*
        - *Reclaim to bring back "wetlands"*
    - *Streams*
        - *Reclaim to improve water "transport and storage" functions*
        - *Reclaim to improve "management of water energy" functions*
        - *Reclaim to improve "sediment processes"*

Three Zones (depending on the location(s) of your project impacts)

I. **Wetlands greater than 50 feet from streams:**
Goals: Improve "surface water runoff management" and "habitat"; bring back "wetlands". These functions are inter-related.

1. Ideas for improving management of surface water runoff:
   How can you slow, spread and sink surface water runoff so that it stays on site?
   [ ] Slow water by breaking up slopes to include terraces, shelves, or benches, with or without planting
   [ ] Spread and sink water by constructing shallow swales and/or depressions:
   - Shallow swales and depressions collect and hold water and sediment;
   - May be located at toes of slopes to catch sediment;
   - Depressions should be dish shaped with rounded margins.
2. Ideas for improving habitat:
   - Many species, including moose, snowshoe hare, voles, and birds, utilize dense new stands of shrubs for cover, shelter and food.
   - Encourage natural re-vegetation of by grading portions of your site to collect and hold moist soil.
3. Ideas for restoring wetlands:
   Shape areas of the floodplain to promote natural re-establishment of wetlands.
   - Objective is to establish topography at an elevation where soil saturation occurs:
     - Mimics the existing natural floodplain topography
     - Creates habitat diversity
     - Creates a suitable environment for wetland establishment

   [ ] Construct off channel (floodplain) wetlands:
   - Off channel wetlands should be more than 25 feet from the bank of the channel
   - Off channel features should not encroach on adjacent slopes
   - Avoid creating steep slopes near channels or in floodplains (erosion potential)

   [ ] Construct Flood Flow Channels:
   - Construct shallow channels in the floodplain, generally parallel to stream flow, that will slow down and store excess water during flood events;

   [ ] Construct Depressions:
   - Shallow depressions are areas where water and sediment can accumulate;
   - Located at toes of slopes near floodplain to catch sediment;
   - Created depressions should be dish shaped; and
   - Depression margins should be rounded.

   [ ] Include Elevated Areas:
   - Elevated areas within the floodplain provide areas for woody debris to beach during flood events;
   - Located anywhere within the floodplain but may be created along channel margins through rehabilitated area; and
   - Should be no more than 1 foot above the rehabilitated floodplain surface.

   [ ] Re-construct setting ponds into shallow ponds with a shallow underwater shelf around the edge. Describe and show plans with pond and shelf dimensions.
   [ ] Suggest other practices you know of that can improve the functions: Describe:

II. Wetlands within 50 feet of streams:

Goals: Improve "management of water energy"; provide "flood plain connectivity"; improve "habitat"; improve "water transport and storage" and "sediment processes". These functions are inter-related.

[ ] Pull back or remove unstable stockpiles and tailings

[ ] Provide grading and structures for "surface water runoff management"

[ ] Provide vegetated stream buffers:

[ ] Leave existing vegetation and topography – trees, shrubs, old channels

[ ] Re-establish vegetated stream buffer –

Choose local plant materials such as willows, alders and cottonwood. Timing is crucial to re-vegetation success. Spring planting is ideal in places where the primary growing season occurs in the late spring and/or summer. The end of the planting season for Interior Alaska generally falls between August 15th and 31st. Some common re-vegetation alternatives include:

[ ] Remove soil and vegetation from an undisturbed location and placing the material in shallow depressions

[ ] Create shrub clump nursery on-site

- use shrubs that removed for mining operation
- use later to re-establish buffer

[ ] Re-plant willow saplings/ or plant dormant or rooted cuttings, or bundles.

[ ] Plant seedlings or seeds, and applying fertilizers

Reference material from the State of Alaska can be found at:
www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.main
http://plants.alaska.gov/interior_reveg/interior_reveg_web.pdf

[ ] Floodplain rehabilitation and connectivity *–During re-contouring, create a floodplain which promotes the following objectives:*

- Transports incoming flood discharge through the rehabilitated area
- Provides a buffer between rehabilitated channel and uplands
- Creates a suitable environment for wetland establishment

[ ] Floodplain Dimensions:

- Floodplain should be graded to no more than two (2) feet above the top of the rehabilitated channel bank;
- Floodplain needs to match upstream floodplain width; and
- Floodplain needs to match downstream floodplain width.

Wetlands within 50 feet of streams (Continued)

[ ] Wetland creation in the floodplain:
Shape areas of the floodplain to promote natural re-establishment of wetlands.

- Objective is to establish topography at an elevation where soil saturation occurs:
  - Mimics the existing natural floodplain topography
  - Creates habitat diversity
  - Creates a suitable environment for wetland establishment

[ ] Construct off channel (floodplain) wetlands:

- Off channel wetlands should be more than 25 feet from the bank of the channel
- Off channel features should not encroach on adjacent slopes
- Avoid creating steep slopes near channels or in floodplains (erosion potential)

[ ] Construct Flood Flow Channels:

- Construct shallow channels in the floodplain, generally parallel to stream flow, that will slow down and store excess water during flood events;

[ ] Construct Depressions:

- Shallow depressions are areas where water and sediment can accumulate;
- Located at toes of slopes near floodplain to catch sediment;
- Created depressions should be dish shaped; and
- Depression margins should be rounded.

[ ] Include Elevated Areas:

- Elevated areas within the floodplain provide areas for woody debris to beach during flood events;
- Located anywhere within the floodplain but may be created along channel margins through rehabilitated area; and
- Should be no more than 1 foot above the rehabilitated floodplain surface.

[ ] Suggest other practices you know of that can improve the functions: Describe:

III. Stream channel impacts:

Goals: Improve "management of water energy"; provide "flood plain connectivity"; improve "habitat"; improve "water transport and storage" and "sediment processes". These functions are inter-related.

[ ] Practices which reduce head-cutting/channel degradation

[ ] Floodplain rehabilitation and connectivity –*During re-contouring, create a floodplain which promotes the following objectives:*

- Transports incoming flood discharge through the rehabilitated area
- Provides a buffer between rehabilitated channel and uplands
- Creates a suitable environment for wetland establishment

[ ] Floodplain Dimensions:

- Floodplain should be graded to no more than two (2) feet above the top of the rehabilitated channel bank;
- Floodplain needs to match upstream floodplain width; and
- Floodplain needs to match downstream floodplain width.

[ ] Provide vegetated stream buffers:

[ ] Leave existing vegetation and topography – trees, shrubs, old channels

[ ] Re-establish vegetated stream buffer –
Choose local plant materials such as willows, alders and cottonwood. Timing is crucial to re-vegetation success. Spring planting is ideal in places where the primary growing season occurs in the late spring and/or summer. The end of the planting season for Interior Alaska generally falls between August 15th and 31st. Some common re-vegetation alternatives include:

[ ] Remove soil and vegetation from an undisturbed location and placing the material in shallow depressions

[ ] Create shrub clump nursery on-site

- use shrubs that removed for mining operation
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[ ] Re-plant willow saplings/ or plant dormant or rooted cuttings, or bundles.

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http://plants.alaska.gov/interior_reveg/interior_reveg_web.pdf

[ ] Suggest other practices you know of that can improve the functions: Describe:

APMA # _____

Certification

Certify that information contained in the APMA and the Corps GP Packet truthfully represents the conditions at the project site and the plans I intend to follow.

_____ _____

Operator Signature DATE

The Certification must be signed by the person who desires to undertake the proposed activity (applicant).

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.