

General Permit (GP) POA-2014-55 Mechanical Placer Mining Activities with the State of Alaska 40 CFR 230.7 Evaluation

(a) *Conditions for the issuance of General permits.* A General permit for a category of activities involving the discharge of dredged or fill material complies with the Guidelines if it meets the applicable restrictions on the discharge in § 230.10 and if the permitting authority determines that:

- (1) The activities in such category are similar in nature and similar in their impact upon water quality and the aquatic environment;
- (2) The activities in such category will have only minimal adverse effects when performed separately; and
- (3) The activities in such category will have only minimal cumulative adverse effects on water quality and the aquatic environment.

(b) *Evaluation process.* To reach the determinations required in paragraph (a) of this section, the permitting authority shall set forth in writing an evaluation of the potential individual and cumulative impacts of the category of activities to be regulated under the General permit. While some of the information necessary for this evaluation can be obtained from potential permittees and others through the proposal of General permits for public review, the evaluation must be completed before any General permit is issued, and the results must be published with the final permit.

(1) This evaluation shall be based upon consideration of the prohibitions listed in § 230.10(b) and the factors listed in § 230.10(c), and shall include documented information supporting each factual determination in § 230.11 of the Guidelines (consideration of alternatives in § 230.10(a) are not directly applicable to General permits);

(2) The evaluation shall include a precise description of the activities to be permitted under the General permit, explaining why they are sufficiently similar in nature and in environmental impact to warrant regulation under a single General permit based on subparts C through F of the Guidelines. Allowable differences between activities which will be regulated under the same General permit shall be specified. Activities otherwise similar in nature may differ in environmental impact due to their location in or near ecologically sensitive areas, areas with unique chemical or physical characteristics, areas containing concentrations of toxic substances, or areas regulated for specific human uses or by specific land or water management plans (e.g., areas regulated under an approved Coastal Zone Management Plan). If there are specific geographic areas within the purview of a proposed General permit (called a draft General permit under a State 404 program), which are more appropriately regulated by individual permit due to the considerations cited in this paragraph, they shall be clearly delineated in the evaluation and excluded from the permit. In addition, the permitting authority may require an individual permit for any proposed activity under a General permit where the nature or location of the activity makes an individual permit more appropriate.

(3) To predict cumulative effects, the evaluation shall include the number of individual discharge activities likely to be regulated under a General permit until its expiration, including repetitions of individual discharge activities

Evaluation:

It is estimated from data compiles from the Applicants for Permit to Mine in Alaska (APMA) and Corps permitting data that there are approximately 450 to 550 active placer mines. It is assumed that most of these placer mining operations include one or more activities which would require Department of the Army (DA) permits pursuant to Section 404 of the Clean Water Act.

Placer mining in Alaska is invariably conducted in or in close proximity to streams and rivers; consequently, there are numerous project components normally associated with these activities which would require a Department of the Army Permit. This General Permit would authorize the placement of dredged and/or fill material into waters of the U.S., including wetlands for certain classes of activities

associated with placer mining in Alaska in which impacts are similar in nature. A water quality certification, as required under Section 401 of the Clean Water Act, must be received from the State before the proposed General Permit could be issued.

Specifically the General Permit would authorize up to five acres of wetland disturbance and/or up to 1,500 linear feet of stream channel diversion or relocations, at any one time. Mechanical placer mining activities that involve placement of fill into waters of the United States, including wetlands, and would be authorized under this GP are:

- Mechanized land clearing
- Construction of berms or dams associated with settling ponds
- Stream *diversions* (temporary)
- Stream *relocations* (permanent)
- New mine features constructed in wetlands, such as airstrips, camps, roads within the mining operation, culverted crossings of streams or wetland areas
- Access roads and road extensions outside the mining operation intended to be permanent (may be permitted through a different process)
- Stockpiles
- Reclamation and *restoration* activities
- Exploration activities for placer mining are included. Activities include:
 - fill for exploratory drill pads
 - fill for trenches and holes
 - side casting from trenches and holes
 - bulk samples and other test methods

The consideration of the prohibitions listed in § 230.10(b) and the factors listed in § 230.10(c), and documentation of factual determination in § 230.11 of the Guidelines, can be found in the Department of the Army Permit Evaluation and Decision Document.

Cumulative Impacts:

The area in which impacts resulting from the proposed project would occur is throughout the State of Alaska, but are limited to locations where there are gold deposits. Since the last re-issuance on May 11, 2007, 250 GPs have been verified by the Corps for Placer Mining Activities.

Cumulative impact analysis will be based on a geographic hierarchy, based on general, publically available data such as records of numbers of acres mined, and linear feet of stream diversion, within specific geographic area.

Available data do not have resolution to discern how many of these impacts are located in waters of the U.S., because the permit has covered wetland and upland impacts since 1988. It has only been recently (2012) that operations are required to provide information for a wetland JD. Despite the lack of specific historic wetland impact information, we have sufficient information available for this analysis.

The geographic area for this assessment is the distribution within USGS Quadrangles statewide where small scale placer mining has been known to take place between 2007 and 2015. The table below represents mine impacts since 2007 for the USGS Quadrangles with the greatest placer mining activities. The quadrangles that have been analyzed represent about 60 percent of small scale placer mining operations in the State. The Quadrangles evaluated range in number of operations between 16 to 100 and represent areas with the most impact as a result of mining. These data represent placer mining operations that meet the current General Permit. The acreage of impacts represented in the table is for total impacts, uplands and wetlands. While these data do not reflect total impact to the aquatic resources, it reflects the maximum impact that have occurred.

QUAD	Total Number of GP Permits	Total Number Acres (Ac.)	Average APMA Mine Size (Ac.)	SUM Total Projected Mined Acres 2007-2015	Average Projected Mine Size (Ac.)	SUM Total Size Stream By-Pass (Ft.)	Average Size Stream Bypass Impact (Ft.)
CIR	100	377.41	3.77	803.51	15.91	24950	250
EAG	75	292.38	3.9	593.68	15.62	20740	546
TAN	40	213.65	10.42	386.35	18.85	2610	127
LIV	42	164.8	7.85	281.8	13.42	6920	338
FAI	39	176.1	8.81	366.9	18.35	12095	605
TAL	32	110.05	6.67	176.55	10.7	3530	214
WIS	29	100.9	6.73	188	12.53	3750	250
CHN	19	62	6.2	123.3	12.33	3211	321
NOM	16	80.6	9.48	127.63	15.02	3500	412
<u>SUM:</u>	392	1577.89	63.83	3047.72	132.73	81306	3063

The total number of acres is based on what has been submitted on the APMA as active mined area. The SUM total equals the active mine area plus areas that have been reclaimed. Based on the 392 mining operations looked at, the total acreage of mined area plus reclaimed area for the areas with the most mining activities is about 3,050 acres and the total length of stream by-pass is 81,306 linear feet. As these numbers represent a total of area impacted it is anticipated that actual impacts to the aquatic resource are less.

There is also temporal variability in mining impacts. More mining occurs when the price of gold is high compared to the expenses of extraction, the strength of the dollar, international demand, and other global factors. Historically, more areas have been mined than are being mined today. Many of the cumulative impacts to aquatic resources from placer mining occurred before the CWA in 1976 and before state requirements for reclamation. Many areas that were mined in the past are not currently being mined. Some areas that were mined historically are being remined and then reclaimed, returning some of the natural functions. During the past seven years the price of gold increased, and accordingly the number of APMA mining applications received in the state increased. Some of this increase translated into active mining impacts.

The increase in mining applications are assumed to result into a partial increase in operations and impacts. Not all operations who receive permits go into operations. Many operations maintain an active application without mining. A 2013 study titled "Placer Economic study" estimated that 40% of operations were actively mining. The proposed GP would reduce the acres of aquatic resources authorized to be impacted per mining operation from 10 acres to 5 acres and would reduce the allowed length of stream

diversion from 2,000 feet to 1,500 feet. It is estimated that with the issuance of the proposed GP with 5 acres of wetland impact and with an estimated 450-550 placer mines, that 2250-2750 acres of aquatic resource could be impacted annually. However, the extent of aquatic resources varies depending on location of the activity across the State and it is not anticipated that all active mines would be impacting 5 acres of aquatic resources and this would be a maximum estimate.

Other actions - past, proposed, and reasonably foreseeable - that have had or are expected to have impacts in the same area include past, proposed and future mining and mining support activities. The impacts or expected impacts from these other actions are: The loss of some of the functions of water of the U.S. during active mining and the loss of many of the functions of streams during the bypass activities; however with required reclamation, it is anticipated that there would be eventual regeneration of some of the functions of the aquatic resources on the mined lands. The overall impact that can be expected if the individual impacts are allowed to accumulate is conversion of palustrine wetlands to uplands and the creation/restoration of shallow open ponds, riparian areas, and intermittent, seasonal, and perennial drainages.

If the number of projects increase compared to the last 5 years, it is anticipated that activities authorized by this GP will continue to only have minimal cumulative adverse effects on water quality and the aquatic environment as the GP decreased the acreage and linear feet of waters of the U.S. impacts. Additionally, these activities generally occur in more rural and remote areas, and, are limited to gold bearing streams. The impacts from a small mining operation in a rural or remote area with limited development and little to no impermeable surfaces are not the same as similarly sized impact in urbanized area.

The monitoring requirement of the GP would allow the Corps to monitor the number and acreage of projects on an annual basis. This would help track not only use of the GP statewide but within specific locations and will help determine if the use of the GP to authorize placer mining activities would result in continued minimal cumulative impacts. After taking into consideration the potential number of anticipated future projects authorized under this GP and the terms and conditions of the GP, projects authorized using the GP are expected to have no significant impacts and no more than minimal individual and cumulative adverse impacts to the aquatic environment.