

**Department of Environmental Conservation
Response to Comments**

for the

Mechanical Placer Miners General Permit

APDES Permit No. AKG370000

Public Notice: February 19, 2021 – March 22, 2021

April 15, 2021



Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

1.0 Introduction

1.1 Summary of the Permit

The Mechanical Placer Miners General Permit (AKG370000) authorizes discharges of process wastewater and drainage waters from open-cut mines and mechanical dredges that process gold placer ores and rely on beneficiation processes based on gravity separation. The permit provides statewide coverage for discharges to fresh waters of the U.S., with certain limitations. Fact Sheet Sections 1.0 and 2.0 provide additional coverage information and regulatory history. Specific conditions under which pollutants may be discharged are detailed in the permit and further explained in the fact sheet.

1.2 Opportunities for Public Participation

The Alaska Department of Environmental Conservation (DEC or the Department) proposed to reissue an Alaska Pollutant Discharge Elimination System (APDES) wastewater discharge permit for the discharges from mechanical placer miners. To ensure public, agency, and tribal notification and opportunities for participation, the Department:

- identified the permit on the annual Permit Issuance Plan posted online at: <https://dec.alaska.gov/water/wastewater/pip/>;
- notified, via letter, fax and/or email, potentially affected tribes, and local governments that the Department would be working on the permit;
- posted a preliminary draft of the permit on-line for a 10-day applicant review on January 15, 2021 and notified potential permittees, tribes, local governments, and other agencies, including the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Natural Resources (DNR), the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Environmental Protection Agency (EPA);
- formally published public notice of the draft permit in two newspapers (*Anchorage Daily News* and *Fairbanks Daily News-Miner*), posted the public notice on the Department's public notice web page, and distributed the public notice to potential permittees, tribes, local governments, and other agencies;
- posted the proposed final permit on-line for a 5-day applicant review on April 15, 2021 and notified potential permittees, tribes, local governments, and other agencies; and
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft, and proposed final permit were available for review.

The Department received written comments on the draft permit from the following interested parties: Alaska Miners Association (AMA), U.S. Fish and Wildlife Service (USFWS), Larry Wilmarth (LW), and Taylor Englert (TE).

This document summarizes the comments submitted and the justification for any action taken or not taken by the Department in response to the comments. Commenter

references are included within the comment summaries. Significant changes are identified herein and reflected in the final permit and fact sheet. Minor changes (such as formatting, typos, contact information, or minor wording edits) are not addressed within this document but may be included in the final permit and fact sheet.

2.0 Public Hearing

2.1 Comment – Public Hearing Request

One commenter requested a public hearing “since this new alleged permit effects [the commenter’s] long term ability to perfect [their] mining claims, and the vague wording needs [to be] addressed.” (TE)

Response:

Consideration of public meetings and hearings for a publicly noticed permit is dependent in part on the public interest expressed. DEC received only one request for a hearing during the comment period. The *Mechanical Placer Miners General Permit* was first issued in 1994 and has since been through two modifications and four reissuances, with minimal changes, prior to the current version; thus, offering numerous opportunities for public input. See Fact Sheet Section 2.0 for a permit history. Based on limited public interest in the proposed reissuance and consideration of the fact that none of the requestor’s comments reflect changes made to the current reissuance, the Department determined that a public hearing is unwarranted.

3.0 General Comments

3.1 Comment – Economic Impacts

One comment noted that “the more challenging you make it for a miner to make a profit mining, the fewer minerals will be produced.” (LW)

Response:

DEC continually strives to issue balanced permits and considers the economic impact of the permit requirements while fully protecting human health and the environment as required under the Clean Water Act.

3.2 Comment – Executive Order 13817

The following comment regards potential violations of Executive Order 13817: “Does this new permit violate Executive Order 13817 in any way? There are many minerals and gemstones placer mined not just gold. If the new LNG and Train corridor is foreign funded then taking away domestic ability to supply strategic and critical resources is effected, and this new permit could be violating that EO order and federal

law by allowing foreign investments to control Alaskan resources. This new permit hampers small miners and locals, when the EO order was signed to help small domestic miners too. The DEC didn't send me the full water bill in 2021 and if I paid the 225\$, I could have possible still lost my permits under the DEC's new alleged permit. How many miners will pay the 225\$ bill and still lose their permits being 'delinquent'? And does that violate EO# 13817 also? Does the DEC not recognize that Executive Order?" (TE)

Response:

Executive Order 13817, *A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals*, was published in the *Federal Register* on December 20, 2017. The Order provided a definition of "critical minerals" and established a deadline for a published list of critical minerals (<https://www.federalregister.gov/documents/2017/12/26/2017-27899/a-federal-strategy-to-ensure-secure-and-reliable-supplies-of-critical-minerals>). The Secretary of the Interior published a final list of 35 critical minerals in the *Federal Register* on May 18, 2018 (<https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018>). The final critical minerals list does not include gold. The *Mechanical Placer Miners General Permit* is only applicable to gold placer mining; therefore, neither the permit nor any related actions violate Executive Order 13817. No changes were made to the permit or fact sheet as a result of this comment.

3.3 Comment – Mining Rights

The following comment regards potential impacts on mining claims and upland leases: "Does this new alleged permit intend take away my right, duty and ability to 'perfect' my mining claims or obtain a future upland lease on them? The goal of historic and modern placer miners is to use placer as a testing ability to follow leads in a goal to expose veins or deposits and perfect his/her mining claims in both Alaskan and Federal laws. Placer mining is not an industry as this new permit states or the DEC's opinion. It is a basic test during explorations for the larger mining Industry as a whole. I own almost 3000 acres and obviously my goal is to eventually develop something larger than just a placer mine. The industry description on this alleged permit is an opinion by DEC/EPA and needs amended to reflect the perfecting ability of miners and prospectors. The State does not differentiate between placer and lode claims, and this alleged permit appears to be 'Commandeering' Federal laws into State lands. The DEC however is not trying to fix Red Dog Mine, the most toxic mine on North America. This alleged permit needs amended to what lands the DEC has jurisdiction over including DNR owned, federal patented and tribal lands." (TE)

Response:

The permit does not differentiate between industrial mining, testing, or “perfecting” claims. The commenter appears to be referring to the Fact Sheet which uses the term “industry” in a general sense to describe placer mining. Although some miners operate under the permit for the purposes of testing claims, the majority of permittees obtain coverage for full scale mining operations. Therefore, the general use of the term “industry” in the Fact Sheet is warranted and because such use does not affect permit coverage, the use of the term does not take away any rights to “perfect” mining claims or obtain future upland leases.

The comment also states the “permit needs amended to what lands the DEC has jurisdiction over including DNR owned, federal patented and tribal lands”. The permit covers discharges to waters of the U.S., as defined in regulation at 18 AAC 83.990(77), and, with only a few exceptions, is applicable statewide regardless of land ownership.

No changes were made to the permit or fact sheet as a result of this comment.

3.4 Comment – Threatened and Endangered Species

One comment concurred with DEC that species listed as threatened or endangered under the Endangered Species Act are unlikely to occur within areas where this GP will be used within the State. (USFWS)

Response:

Thank you for the comment. No changes were made to the permit or fact sheet as a result of this comment.

4.0 Comments on Permit Coverage

4.1 Comment - Permit Parts 1.1.1 (Coverage) and 1.3 (Coverage Limitations)

One set of comments recommended that the permit include coverage for discharges to the “all waters of the U. S., including salt or marine waters and tidally influenced waters”; and that the prohibitions at sections 1.3.1.3 and 1.3.1.4 should be amended to allow discharges into “open waters” and “marine waters.” (AMA)

Response:

The current General Permit (GP) is structured largely around federal Effluent Limitation Guidelines at 40 CFR Part 440, Subpart M (See Fact Sheet Section 5.0) that were developed for open-cut operations discharging to fresh water. Thus, effluent limits in the permit are based on freshwater criteria within State Water Quality

Standards (18 AAC 70) and not protective of marine uses. Inclusion of operations under a general permit is need based and considered when a number of point sources require similar permit conditions (e.g., similar effluent limits and monitoring) and are better covered under a single permit rather than multiple individual permits. DEC has considered inclusion of marine waters during prior reissuances. However, the Department has not received any individual permit applications or significant interest from mechanical placer mine operations proposing discharges to marine waters. Therefore, the permit does not cover discharges to marine waters. If significant interest is received, the Department retains the ability to either modify the permit or incorporate changes during the next permit reissuance. No changes were made to the permit or fact sheet as a result of this comment.

4.2 Comment - Permit Parts 1.2 (Authorized Placer Mining Operations)

The following comment regards mining for gemstones or industrial diamonds: “Is placer mining for gemstones or industrial diamonds not covered under this new permit or even the DEC and EPA then? I have a small gemstone site on my claim blocks I am currently exploring. This new alleged permit only mentions gold as if it is the only thing placer mined. The wording alone needs amended as it sounds like gem and precious stone miners or even abrasive garnet sand miners not even looking for gold are exempt from your new permit and jurisdiction anyway since you admit it is not your industry. Not everyone lusts after gold or metal mining and this new permit may violate EO order #13817.” (TE)

Response:

The permit only covers discharges from operations that process gold placer ores. See Permit Part 1.2.1. Discharges from operations solely processing other placer mined materials, such as gemstones or industrial diamonds, may be covered under either an APDES individual or other applicable general permit. The Department has not received an application to permit discharges from gemstone or industrial diamond placer mining and would develop the appropriate permit upon receipt of an application. No changes were made to the permit or fact sheet as a result of this comment.

4.3 Comment - Permit Part 1.3 (Limitations on Coverage)

One comment recommended the use of this GP be excluded from impaired waterbodies unless there is an effluent limit (reflecting natural, unimpaired conditions) established for those impaired waterbodies. The comment further urged the DEC to minimize confusion amongst and foster positive working relationship between miners and agencies by requiring individual permits on impaired waters, thus aligning the

permit with the U.S. Army Corps of Engineers *Regional General Permit for Placer Mining*. (USFWS)

Response:

A placeholder turbidity limit of 5 NTU has been added to Permit Table 2 (Footnote d.) for discharges to impaired waters that do not have Total Maximum Daily Loads (TMDLs) for turbidity. The 5 NTU value is a fixed limit, not dependent on upstream samples, and therefore is protective of the most stringent water quality criterion for turbidity. Upon TMDL implementation for a waterbody, an effluent limit based on natural conditions established within the TMDL applies. Currently, all placer mined creeks in impaired waters have TMDLs for turbidity, and this situation does not exist. See Fact Sheet Sections 5.2.2.1 and 7.0 for additional details.

Regarding variability between permits from different agencies, whereas it is unfortunate at times, it is necessary due to differences in jurisdiction and authority. Although the Corps of Engineers and DEC both cover placer mines under general and individual permits, the permit requirements, timeframes, and costs involved with the respective agencies permits differ substantially. Per APDES regulations at 18 AAC 83.215, the Department retains the ability to require individual permits on a case by case basis as it deems such actions necessary.

4.4 Comment - Permit Parts 1.3.1.1 (Leaching)

The following comment regards leaching: “Does natural acidic rainwater count as leaching too or is it just applying leachate chemicals such as bromide, chlorides or cyanide? I own most of the True North road next to the True North Hindenberg pit site. The road is made up of both Ft Knox and True North ore. It leaches everytime it rains, and even a carbon filter can catch gold normally wasted. Pressure vessels, In situ technology and pressure reactors leach instantly and are not heap leach or vat leaches as defined by the DEC’s opinions on technology and defining leaching. If ore is removed from DNR lands does the DEC have jurisdiction over private, patented, tribal or other lands not belonging to the State?” (TE)

Response:

Natural acidic rainwater does not count as leaching under Permit Part 1.3.1.1. The permit covers discharges to waters of the U.S., as defined in regulation at 18 AAC 83.990(77), and, with only a few exceptions, is applicable statewide regardless of land

ownership. No changes were made to the permit or fact sheet as a result of this comment.

4.5 Comment - Permit Parts 1.3.1.2 (Hydraulicking)

The following comment regards hydraulicking: “Is hydraulicing [sic] any pressure that breaks up or thaws material or just washing material down into a box? This is far too vague and needs addressed in an open public hearing. This alleged permit states that a suction dredge is also hydrdraulic and need clarified. My intent on my claims is to use small amounts of water pressure to run a venturi and hydrolift system to suck emulsified material up bore holes into a small wash plant. Bore hole mining does not meet any description this alleged permit describes and there’s no need to burn gasoline when water pressure is free. Again this new rule may violate federal law and EO# 13817 and needs discussed in a public hearing to clarify what exactly the DEC determines ‘hydraulic’ to be.” (TE)

Response:

Hydraulicking is a commonly used placer mining term and refers to the use of high-pressure water through a nozzle to move overburden or ore on the surface. The Department has neither expanded nor applied the term beyond the most common usage or original intent. With regard to permit conditions, the term does not apply to “bore hole mining” or suction dredging. To reduce the potential for confusion, the definition in Permit Appendix C has been clarified.

4.6 Comment – Permit Part 1.3.2 (National Wildlife Refuges)

One comment recommended all placer discharges upstream of National Wildlife Refuge (NWR) boundaries be authorized under individual permits. The comment also recommended the DEC work closely with the downstream NWR before permit issuance to ensure water quality standards will enable the NWR to meet their Federal mandates under the Alaska National Interest Lands Conservation Act. (USFWS)

Response:

As required by the permit, no discharges will be authorized within a National Wildlife Refuge without written approval from the USFWS. The permit is designed to protect all designated and existing uses of waters of the U.S. equally throughout all of Alaska including Nation Wildlife Refuges and all upstream waters. Per APDES regulations at 18 AAC 83.215, the Department retains the authority to require individual permits on a case by case basis as it deems such actions necessary. No changes were made to the permit or fact sheet as a result of this comment.

4.7 Comment – Migratory Birds

Once comment recommend the DEC minimize, to the greatest extent practicable, impacts to migratory birds from degraded water quality, especially near important wildlife areas, such as Important Bird Areas (IBAs) and National Wildlife Refuges (NWR). This may be accomplished by requiring an Individual Permit (IP) in, and upstream of, these important wildlife areas, and working with the Service to implement appropriate mitigation measures to prevent degrading the water quality. (USFWS)

Response:

DEC appreciates the responsibilities and concerns of the USFWS. The permit is designed to protect the "growth and propagation of fish, shellfish, other aquatic life, and wildlife" equally throughout all of Alaska including Important Bird Areas, National Wildlife Refuges, and their surroundings. Per APDES regulations at 18 AAC 83.215, the Department retains the authority to require individual permits on a case by case basis as it deems such actions necessary. No changes were made to the permit or fact sheet as a result of this comment.

4.8 Comment – Residual and Eluvial Veins

The following comment regards residual and eluvial veins: “Are residual and eluvial veins not covered under the DEC permit? The opinion of DEC/EPA only lists alluvial placer, Fossil placer, and lode mining but fails to even acknowledge residual and eluvial deposits which are common in Fairbanks. The DEC needs to amend its permit to separate the difference between placer Alluvial and hard rock Eluvial operations since many Fairbanks placers are miles from any creeks or hundreds of feet higher in elevation than creeks.” (TE)

Response:

The permit does not distinguish between different placer mining deposits. The comment appears to refer to Fact Sheet language within Section 3.0 that provides a general description of the placer mining industry. The Fact Sheet language provides a broad industry narrative and is not inclusive of all possible placer deposits. Fact Sheets describe the nature of potential discharges and permit development and thus differ from enforceable permit stipulations. No changes were made to the permit or fact sheet as a result of this comment.

4.9 Comment – Silt Barriers and Turbidity Curtains

One set of comments suggested a provision in the text of the permit for silt barriers or turbidity curtains in areas where the operation would not inhibit fish passage. (AMA)

Response:

This comment appears to be referring to the deployment of floating turbidity or silt curtains within a stream, or similar waterbody, to control turbidity. The APDES program, implemented under Section 402 of the Clean Water Act, is a point source program, meaning that discharge limits must be met at the discharge point prior to entering waters of the U.S. Use of floating curtains to meet effluent limits within the waterbody, beyond the discharge point, would require approval of a treatment works, water quality variance, or other special condition and is beyond the scope of a general permit. The use of land-based silt barriers, such as silt fences or coir logs is allowed under Permit Part 3.2.2 to control drainage waters that cannot otherwise be contained within the plant site. No changes were made to the permit or fact sheet as a result of this comment.

4.10 Comment – Certified Erosion and Sediment Control Lead (CESCL) Training

One comment noted the USFWS is developing a CESCL training specific for placer miners, modeled after the CESCL training for the construction industry, which is a requirement under the DEC’s Construction General Permit. The comment urged DEC to consider making the CESCL-Placer training, once finalized and vetted, a requirement under this GP, or its next iteration. (USFWS).

Response:

A CESCL training or certification aimed at placer mining has not been developed; therefore, no changes were made to the permit or fact sheet as a result of this comment. The Department will monitor the continued development of a placer mining CESCL training program for inclusion in future permits.

5.0 Comments on Effluent Limitations and Monitoring Requirements

5.1 Comment - Permit Part 2.1 (Settleable Solids, Turbidity, and Arsenic Monitoring)

One comment recommended requiring daily monitoring for settleable solids and turbidity instead of proposed schedule of three times per week. The comment also stated that to ensure that accurate turbidity measurements are being collected, further information needs to be provided in Permit Appendix E (Sampling Protocol) including instrumentation minimum standards, calibration protocols, accuracy and range requirements, and procedures for measuring the sample once collected. The comment further noted that for arsenic sampling, no analysis method or reporting requirements, including laboratory quality assurance and quality control procedures are specified and that the commenter would welcome the opportunity to partner with the DEC to

develop a water quality monitoring training program to help miners with their collection and record keeping to provide more accurate data for the DEC. (USFWS)

Response:

DEC permit administration, field presence, and experience over 10 years of permit administration indicate that daily Best Manage Practice (BMP) inspections are the most effective element in reducing and preventing discharges of sediment and turbidity. Based on DEC observation, placer mine discharges tend to show little variability in turbidity over time and the current turbidity sampling schedule of three times per week has proven to adequately represent discharges. Furthermore, as discussed in Fact Sheet Section 6.1.2, the settleable solids limit is significantly easier to meet than the turbidity limit. Thus, turbidity, as the more conservative limit, is an adequate control for settleable solids and increased settleable solids sampling is unwarranted.

With regard to Permit Appendix E, the Sampling Protocol supplements conditions within the permit and is not intended as a stand-alone document. Monitoring conditions are outlined in Permit Part 2.1.2 and further detailed in Permit Appendix A, Standard Conditions. Per Appendix A, Part 1.11.4 (Monitoring Procedures), analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010. Regulations at 40 CFR Part 136 stipulate controls such as instrumentation minimum standards, calibration protocols, accuracy and range requirements, and sample measuring procedures. Permit Appendix A, Part 3.1 (Representative Sampling), stipulates that samples and measurements must be representative of the volume and nature of the monitored activity or discharge. It is incumbent on the permittee to take representative samples yielding scientifically reproducible results and ensure permit conditions are adhered to. DEC has developed guidance documents and conducted numerous outreach events assisting placer miners with meeting permit conditions and is available to assist other organizations or agencies with similar outreach projects.

No changes were made to the permit or fact sheet as a result of this comment.

5.2 Comment - Permit Part 2.2 (Mixing Zones)

One comment recommended the DEC consider expanding mixing zone stipulations to exclude mixing zone authorizations within known spawning areas of anadromous whitefish species, such as sheefish, least cisco, broad whitefish, humpback whitefish, and bearing cisco. The comment further recommended the DEC take into consideration potential impacts to this resource during project planning and permitting. (USFWS)

Response:

DEC appreciates the responsibilities and concerns of the USFWS. The permit is designed to protect the "growth and propagation of fish, shellfish, other aquatic life, and wildlife." As discussed in Fact Sheet Section 4.2, prior to authorizing a mixing zone, the model is submitted to the Alaska Department of Fish and Game (ADF&G) for review. ADF&G considers any impacts on anadromous or resident fish and sets seasonal limitations as necessary. Per State Water Quality Standards [18 AAC 70.240(f), as approved for CWA purposes on September 30, 2019] a mixing zone will not be authorized in a spawning area for sheefish or whitefish, unless after consultation with ADF&G, it is determined that the discharge does not contain pollutants at concentrations that exceed the criteria for growth and propagation of fish, shellfish, other aquatic life, and wildlife; and will not adversely affect the capability of the area to support future spawning, incubation, and rearing activities. DEC can continue to take into consideration potential impacts to this resource during project planning and permitting. No changes were made to the permit or fact sheet as a result of this comment.

5.3 Comment - Permit Part 2.5.1 (Storm Exemptions)

One comment recommended the DEC review the precipitation and stream flow data that was used to derive discharge related exceedance thresholds and flow conditions and ensure it reflects recent climate conditions. The comment noted Alaskan climate studies and models indicating increased variability in precipitation amounts and increased storm frequency compared to climate normal. The comment further noted that this this may lead to more frequent precipitation related discharge events for permittees to accommodate and thus recommended the DEC ensure BMPs are updated such that permittee operations are designed to mitigate discharge related to more frequent storm events. (USFWS)

Response:

Discharge related exceedance thresholds and flow conditions for storm exemptions are stipulated in federal regulations at 40 CFR Part 440, Subpart M. DEC has limited ability to modify permit conditions based on federal regulations. With the exception of certain instances noted in Fact Sheet Section 6.2, DEC has not observed an increase in permittees claiming relief under the storm exemption provision but can continue to monitor for potential changes. BMP requirements within the permit are developed through an iterative process and the Department adjusts and modifies permit conditions with each reissuance based on field observations, literature reviews, and compliance actions. No changes were made to the permit or fact sheet as a result of this comment.