GENERAL PERMIT (GP) POA-2014-00055-M2

Mechanical Placer Mining Activities within the State of Alaska

AUTHORITY: The District Engineer (DE), Alaska District, U.S. Army Corps of Engineers (USACE), proposes to reauthorize the Regional General Permit (RGP) POA-2014-00055 as RGP-08, for *Mechanical Placer Mining Activities* in the State of Alaska, under Section 404 of the Clean Water Act (CWA) (Public Law 95-217, 33 USC 1344 et seq.).

SUBJECT: This RGP authorizes miners to place *dredged and/or fill material* into *waters of the United States (WOTUS)*, including *wetlands* and streams, for the purpose of *mechanical placer mining* within the State of Alaska, under the terms and conditions of this RGP.

- **NOTE:** In this document Miner, Operator, Applicant, and Permittee are used interchangeably.

- **NOTE**: In this document impacts and disturbances are used interchangeably.

- **NOTE:** Words in *italics* are defined in Appendix A: Definitions, Acronyms, and Abbreviations.

CHANGES FROM PREVIOUS RGP (POA-2014-00055-M1):

- USACE will include all relevant agencies on final *mechanical placer mining* verification letter distribution lists.
- The previously issued RGP allowed for five (5) acres of *wetland*/water *disturbance* at any time, commonly known as a "*rolling footprint*." This RGP no longer allows for the 5-acre "*rolling footprint*" of *WOTUS* disturbance at any time.
    - **NOTE:** A *rolling footprint* is a common *reclamation* term in placer mining. It is still applicable for USACE reclamation, but a *rolling footprint* is no longer used to authorize *WOTUS* impacts for this RGP.
- The total acreage limit for this RGP reissuance is ten (10) acres to *WOTUS*, including *wetlands*, within the 5-year term of the RGP (see Section IV(C)).
    - This RGP reissuance allows USACE to issue a single, one-time waiver for each *single and complete* project within the 5-year term of this RGP (see Section IV(C)), that would allow for up to an additional five (5) acres of *WOTUS* impacts. To qualify, the Permittee must submit sufficient information found within the annual report form demonstrating *successful reclamation* of at least five (5) acres on the previously disturbed areas authorized under this RGP. See the terms and conditions of this RGP for *reclamation* criteria.
    - **With the single, one-time waiver for an additional five (5) acres, the total acreage of disturbance to *WOTUS* authorized under this RGP shall not exceed 15 acres for each *single and complete***

project before the RGP expires on October 31, 2030.

- All *mechanical placer mining operations* must maintain a minimum 35-foot undisturbed, vegetated wetland buffer from flowing *WOTUS*. Certain mining activities are exempt from this. See Section IV "Terms and Conditions for the RGP" for more information on excluded activities.
- Changes and additions were made to portions of the General Conditions of this RGP.
- ***Reclamation*, at a minimum, must meet the criteria for *successful reclamation* and any special conditions included with the verification letter.**

I. ACTIVITIES THAT MAY BE VERIFIED BY THE RGP: *Mechanical placer mining* activities that involve placement of *dredged and/or fill material* into *WOTUS* include:

- Mechanized land clearing; construction of berms or dams; stockpiles.
- Stream *relocations* (permanent); Stream *diversions* (temporary).
- New *ancillary mine* features constructed in *wetlands*, such as airstrips, camps, and roads within the *mine site,* and stream crossings (i.e., culvert, bridge, low-water crossings) of *WOTUS* areas when there is a discharge of *dredged or fill material*.
- Access roads and road extensions outside the mining operation.
- *Reclamation* activities.
- Exploration activities for *placer mining*, such as side cast or discharge of *dredged and/or fill material* for exploratory drill pads, trenches, holes, and bulk samples. Exploration activities are strongly encouraged prior to the beginning of *placer mining*.
- Other processes associated with *placer mining*, such as settling ponds, staging mining equipment, etc.
- Deep ripping, for the purpose of thawing permafrost.

    - **NOTE:** All activities involving discharges of *fill and/or dredged materials* that impact *WOTUS* contribute to the 10-acre total *WOTUS* limit (or 15-acre total if a waiver is granted).

II. LIMITS OF THE RGP: If operations exceed the limits of the RGP, or if USACE review indicates that the operation may have a greater than minimal impact on the environment regardless of size, operators may be required to obtain an Individual Permit (33 CFR 325.2(e)(2)).

- This RGP authorizes up to ten (10) acres of disturbance to *WOTUS* for the 5-year term of this RGP (see Section IV(C)) for each *single and complete* project, unless USACE issues a single one-time waiver allowing up to an additional five (5) acres of impact to *WOTUS* for a total of no more than 15 acres. See "Changes from Previous RGP (POA-2014-00055-M1)" section for more information concerning the waiver.
- This RGP authorizes up to 1,500 linear feet of stream impacts for *diversions/relocations* within the 5-year term of the RGP (see Section IV(C)). Once the 1,500 linear feet of stream *diversion/relocation* impacts have been

reached by *each single and complete* project, the operator cannot impact additional linear feet of streams for the remainder of the 5-year term of this RGP (see Section IV(C)). An individual permit would need to be applied for any additional necessary stream impacts. Impacts for stream *diversions/relocations* will be included in the acreage footprints described above. All stream *diversion* impacts must be *reclaimed* before the expiration of this RGP.

- **NOTE:** A stream *diversion* and its subsequent *reclamation* are counted once in stream impact calculations. If two (2) separate *diversions* are completed, those impacts are combined to determine the cumulative stream *diversion*/*relocation* impacts. For example, a 750-foot *diversion* at the north end of the mining area and another 750-foot *diversion* at the south end would result in a cumulative total of 1,500 linear feet of stream impacts. This would reach the 1,500-foot stream impact limit of this RGP, and no further stream *diversion* or *relocation* work for this *single and complete project* could be authorized under this RGP.

- Miners cannot commence activities until written confirmation from USACE is received.
- Operations solely on federal lands that fit under the terms and conditions of this RGP do not require notification to the USACE prior to the start of mining activities or the submittal of the USACE Annual Report.

III. ACTIVITIES NOT COVERED BY THIS RGP: Some of these activities may require a different type of Department of the Army permit issued by USACE other than this RGP. Contact USACE to determine whether a different permit is required.

- Activities in or *affecting anadromous* fish streams or Alaska Department of Environmental Conservation's (ADEC) Impaired Waters.
    - To avoid *affecting anadromous* fish streams or ADEC's Impaired Waters, mine operations and associated activities shall be separated from these areas via an undisturbed, vegetated buffer. The undisturbed, vegetated buffer areas must extend a minimum distance of 35 feet from the *ordinary high water mark* (OHWM) of listed *anadromous* or impaired waters. There are no exemptions for these waters.
- Temporary mining roads.
    - Roads, for the sole purpose of moving mining equipment, where such roads are constructed and maintained in strict accordance with *best management practices (BMPs)*, are exempt from the CWA (33 CFR 323.4 (a)(6)). Since 1987, the Alaska District has applied the standard that a temporary road has a limit of **three years**, by which time it must be completely removed and restored to pre-construction conditions.
- Recreational Mining.
    - Use of certain hand tools such as a pick, shovel, pan, and/or rocker box, do not require DA authorization, as addressed in Special Public Notice 94-10, September 13, 1994.

- Commercial Gravel Operations.
    - Sale of overburden/gravel from a *mine site* is not authorized by this RGP.
- Suction dredge mining.
    - Use of a suction device to remove bottom substrate from a water body and then discharge the material from a sluice box for the purpose of extracting gold or other precious metals is not authorized by this RGP.
- Mining/working in or *affecting Navigable WOTUS*.
    - Section 10 waters and waters subject to the ebb and flow of the tide.
- Hard Rock or Coal Mining.
    - The process of removing metals or elements within rock is not authorized by this RGP.

IV. TERMS AND CONDITIONS FOR THE RGP (33 CFR Part 325.4)

Due to the substantial variety of geographic and environmental conditions within Alaska, the Terms and Conditions are intentionally less prescriptive. The intent is to allow flexibility in how operations ultimately comply with the terms and conditions of this RGP and the 404(b)(1) Guidelines of the Clean Water Act, including punctual *reclamation* of *mined areas*, by inclusion of project-specific special conditions as needed. It is ultimately the responsibility of operators to ensure compliance with the permit Terms and Conditions. Failure to meet the Terms and Conditions may result in corrective compliance measures or enforcement action.

- **NOTE:** To provide general guidance for effective reclamation of disturbed areas, including wetlands and aquatic features, USACE has created three (3) appendices: Appendix B: BMPs During Mine Site Planning and Operation, Appendix C: Wetland Reclamation BMPs, and Appendix D: Stream Channel Management.

A. GENERAL CONDITIONS (GCs):

The following general conditions must be met in order to be in compliance with this RGP.

In this RGP, the general conditions are organized into three (3) sequential sections that must be followed throughout the placer mining process. The first section outlines requirements for overall *mine site* management and operations, ensuring proper planning and environmental safeguards during active mining. The second section focuses specifically on the management of stream *diversions* and *relocations*, detailing how to minimize impacts to aquatic resources during in-stream work. The final section addresses post-mining *reclamation*, setting standards for reclaiming *wetlands, floodplains*, and *riparian* areas to promote long-term aquatic functions and compliance with the CWA.

During mining operations all USACE authorized activities must not have excessive signs of *erosion* such as, sluffing, slumping, mudflows, or

erosional gullies or rills. Specifically:

1. *Mine Site* Management:
    a. Mine operations, including *diversions* and *relocations*, must be managed to avoid *erosion* of *dredged and/or fill material* from the operation into adjacent and downstream *WOTUS*.
        i. Water management features must be designed to slow, collect, direct, filter, and/or retain water at the *mine site* and prevent sedimentation in adjacent and downstream *WOTUS.* These include, but are not limited to, settling ponds, sediment traps, check dams (See Figure 1. Rock check dams), ditches, filters, natural vegetation buffers, or other features to manage water on the *mine site*. Appendix B provides additional guidance, tools, and examples operators may use to meet these terms and conditions of this RGP given the uniqueness of each *mine site*.
    b. Active *mine site* operations must be separated from active *floodplains* to the maximum extent practicable, via berms, vegetated buffers, diversion ditches, etc.
    c. For end of season shut down procedures, ponds, open areas, and any other authorized, ongoing mining activities must be stabilized and have *BMPs* implemented (Appendix B) to prevent degradation and *erosion* into adjacent areas.

2. Management of stockpiles:
    a. Vegetation, woody materials, organic overburden, peat, and other organics must be stockpiled separately from overburden (non-pay and mineral) for use in *reclamation*. *Reclamation* stockpiles should be left in *stable* piles and protected from *erosion* caused by high water events, snow melt, and precipitation.

3. The Permittee must maintain an undisturbed vegetated buffer area around the edge of any flowing *WOTUS* that are located within or immediately adjacent to the *mined areas* and *ancillary features* (i.e., camps, outhouses, staging areas, etc.) in accordance with the following:
    a. Exemptions are allowed for certain stream related mining activities, such as stream crossings, *diversions*, and *relocations* to mine these areas.
    b. The undisturbed vegetated buffer areas must extend a minimum distance of 35 feet from the *OHWM*.
    c. If the undisturbed vegetated buffer zone between the *mine site* and the *OHWM* of the flowing water cannot be maintained, an adequately protective BMP must be employed, such as berms or other BMPs found with Appendix B.

4. Management of *diversions*:
    a. *Diversions* during mining operations must be *stable*, be able to handle periods of high flow, and not display excessive signs of *erosion*.

i. Channel armoring and flow/grade control structures shall be used to ensure the stability of *diversion* channels. Please see Appendix B for example structures.

b. GPS points are required for beginning and ending points of *diversions* and *relocations*. This information shall be included in the application and annual report.

5. All temporary erosion and sediment control structures must be removed, to the maximum extent practicable, once all components of the mine operations are *stable*.

Construction of stream *relocations* and reclaiming stream *diversions*:

6. Channel *relocations*:
   a. Must be constructed to approximate natural channel dimensions with *stable* slopes and channel bottoms and blend with the upstream and downstream connections. If the natural dimensions are unknown or the channel would be shortened, it must include approved additional instream structures that effectively control the rate of water flow and prevent excessive *erosion.*
      i. The channel banks and bottoms must be stabilized and may need to be reinforced with approved structures along sections subject to *erosion*, scouring, or head cutting due to changes in water velocity (e.g., outside curves, narrow reaches).
      ii. The channels must be constructed to restore *floodplain* connectivity so the stream may access its *floodplains* during high seasonal water events.
      iii. Unless otherwise approved by USACE on case-by-case circumstance, no final stream *relocation* shall be deeply entrenched and resemble a Rosgen F or G stream type.
   b. If a stream is characterized as intermittent, connection of two (2) channels shall occur during a dry period.
   c. If a stream is characterized as perennial, operations must slowly introduce water into the new channel by first removing the downstream barrier then removing the upstream barrier.

7. Stream *Diversions*: all stream *diversion* impacts must be *reclaimed* before the expiration of this RGP.

- **NOTE:** See Appendix D for stream channel *reclamation* BMPs.

***Wetland and Floodplain reclamation*:**

8. *Reclamation* is required for **ALL** operations. Reclamation at a minimum must meet the below terms and conditions to be considered *successfully reclaimed*. Appendices C and D provide guidance, tools, and examples operators may use to meet these terms and conditions of this RGP given the uniqueness of each *mine site*.

a. Recontouring and backfilling:
    i. All stockpiled materials must be used in *reclamation*.
    ii. Recontouring and backfilling materials should be layered from bottom to top in the following order: tailings mixed with non-organic overburden, organic overburden, followed by woody debris. Remixing tailings and non-organic overburden will assist in meeting *successful reclamation* criteria.
    iii. Organic overburden should be redistributed for *reclamation* as soon as possible to limit *erosion* and improve the speed and succession of *revegetation*. Typically, four (4) inches of organics (or more if available) is recommended.
    iv. Pits, exploration drill holes, trenches, ditches, and *diversions* must be backfilled and stabilized.
        - When ponds and pits cannot be backfilled and recontoured to mimic natural *WOTUS* areas in the watershed due to the lack of remaining material, shallow ponds shall be created to reclaim aquatic *functions* with irregularly shaped bottoms and complex irregular banks (shorelines) that gently slope and mimic natural shallow ponds and *wetlands* found within the region. If multiple ponds are created, they should be connected to facilitate the exchange and movement of nutrients and aquatic life. At a minimum, shallow ponds, shall be constructed in a manner to continuously hold surface water during most of the growing season of a typical year. The constructed banks must be *stable* without excessive sluffing/slumping or erosional gullies.
        - Other mined *WOTUS* areas must be backfilled and recontoured in such ways to allow for surface water retention or intercept the ground water table and thus enables persistent soil saturation and shallow inundation to promote *revegetation* and encourage reclamation of *wetlands* and other aquatic resources. Please see Appendix C for example aquatic features.
        - Ditches and trenches must be backfilled and may be contoured to become swales or other similar channels that manage and disperse water flow to reduce *erosion* and promote *wetland* hydrology to *reclaimed* areas.
    v. Compacted areas must be ripped, tilled, or broken up.

9. As mentioned above, *reclamation* must reestablish *floodplain* connectivity to allow streams to overflow and disperse water, energy, nutrients, and sediments onto the land next to the stream during flood events to assist with the *reclamation* of *wetlands* and aquatic *functions*.
    a. As stated above, mined areas shall be backfilled and recontoured to promote water retention and not be backfilled in ways to drain a *WOTUS,* i.e. creation

of French drains.

b. A Permittee must *reclaim* the foundational groundwork to ensure impacts to *mined areas*, resulting from activities verified by this RGP are temporary.
    i. Foundational groundwork includes, but is not limited to:
        - Ensuring enough organics are properly distributed throughout the *mined areas* to allow hydrophytic vegetative growth, wetland development, and the *stabilization* of all components of mining activities.
        - Woody debris/slash piles to roughen *floodplains* and slow water velocities and encourage deposition.
        - Transplant wings and/or brush bars to assist with *stability* and encourage deposition.
        - The use of transplants, vegetative mats, and/or live stakes is strongly encouraged.
        - Please see Appendix C for more information and additional techniques.
    ii. Foundational groundwork *reclamation* is not a single-use activity. It typically requires an adaptive management approach to address issues that may arise during high water events, breakup, freeze up, etc., causing *WOTUS* impacts to be permanent when no actions are taken.

10. *Reclamation* shall be completed within the 5-year terms of this RGP. All reclamation shall be completed no later than October 31, 2030.

- **NOTE:** Operations that have a USACE authorization and are ongoing by the expiration date of the RGP, have an additional 12 months to operate under the terms and conditions of this RGP. The Permittee must notify USACE of the intent to continue mining.

11. *Reclamation* efforts shall be commensurate (i.e., comparable) with the impacts to *WOTUS* to the fullest extent practicable. For example, five (5) acres of *WOTUS* impacts should have the end goal to *reclaim* five (5) acres of *WOTUS* whenever possible.

12. Adaptive management: Operators may have to make adjustments or implement corrective measures to their operations and/or *reclamation* in order to satisfy the terms and conditions of this RGP and/or to address a compliance issue with the CWA. These measures could include, but is not limited to *revegetation*, reuse of settling pond fines to provide growth material in areas targeted for *revegetation*, re-shaping an area, or adjustments to the slope or structures to hold or maintain grade or other activities deemed appropriate and reasonable to satisfy *reclamation* objectives.

13. Operators must follow all conditions listed in the Section 401 Water Quality Certification dated September 23, 2025, and, if needed, their Fish Habitat and/or Fish Passage Permit(s) from the Alaska Department of Fish and Game. For the Permittee's convenience, a copy of the 401 certification is attached.

14. Each year operators must submit the USACE annual report directly to our office (regpagemaster@usace.army.mil) by December 31, regardless of whether or not work was conducted. See additional contact information below. Incomplete reports or unsuccessful *reclamation* may result in non-compliance actions.

    - **NOTE:** If an operation on federal lands requires a waiver for an additional five (5) acres of impacts to *WOTUS*, the Operator must notify USACE and follow the waiver procedures found in the annual report form.

15. RGP authorizations may be transferred from one responsible party to another by submitting a letter of request, or email, to the appropriate USACE office or by sending transfer documentation to the Alaska Department of Natural Resources (ADNR) for posting to their website. Note, the terms and conditions of this RGP, including any special conditions, will continue to be binding on the new responsible party.

16. Should any other agency require and/or approve changes to the work authorized or obligated by this permit, or the Permittee makes changes to their mining plan, the Permittee is advised a reverification of this permit may be required prior to initiation of those changes. It is the Permittee's responsibility to request a reverification of this permit. USACE reserves the right to fully evaluate and approve or deny any request for reverification of work previously authorized by this RGP.

17. The Permittee named in the verification letter must inform USACE in writing if additional operators are present at the *mine site*, so that they can be added to the permit.

18. Trenches may not be constructed or backfilled in such a manner as to drain *WOTUS* (e.g., backfilling with extensive gravel layers, creating a French drain effect). Ditch plugs or other methods shall be used to prevent this situation.

19. The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete blocks with reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

20. Each Permittee who receives an RGP verification letter from USACE must provide a signed certification documenting completion of the authorized activity and implementation of required *reclamation.* The success of required *reclamation*, including the achievement of ecological performance standards, will be addressed separately by the district engineer. USACE will provide the Permittee the certification document with the RGP verification letter. The certification document attached must be completely filled out and returned to

our office within 30 days of completion of the authorized activity or the implementation of required *reclamation*, whichever occurs later.

21. Reliance on Applicant's Data: The determination of this office that use of this permit would not be contrary to the public interest would be made in reliance on the information provided by the applicant, on a case-by-case basis.

22. Reevaluation of Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a revaluation include, but are not limited to, the following:
    a. The Permittee fails to comply with the terms and conditions of this permit.
    b. The information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate (See General Condition 21).
    c. New information surfaces which this office did not consider in reaching the original public interest decision.
    d. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring the Permittee to comply with the terms and conditions of the permit and for the initiation of legal action where appropriate.

23. Discovery of Previously Unknown Remains and Artifacts: Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this RGP, must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

24. Activities Affecting Structures or Works Built by the United States: If an activity also requires review by, or permission from, USACE pursuant to 33 U.S.C. 408 because it would alter or temporarily or permanently occupy or use a USACE federally authorized Civil Works project (a ‘‘USACE project’’). An activity that requires section 408 permission and/or review is not authorized by this RGP until the appropriate USACE office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written RGP verification.

25. Removal of Temporary Structures and Fills: Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas must be revegetated, as appropriate. Following completion of the activity,

temporary structures and/or fills must be removed in their entirety.

26. Tribal Rights: No *mechanical placer mining* activities or operations may impair reserved Tribal rights, resources, or land.

27. Endangered Species: No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under this RGP which ‘‘may affect’’ a listed species or critical habitat, unless ESA Section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of ‘‘effects of the action’’ for the purposes of ESA Section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA Section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

    For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the application must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the applicant of USACE determination within 45 days of receipt of a complete application. For activities where the applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified USACE, the applicant shall not begin work until USACE has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA Section 7 consultation or conference has been completed. If the applicant has not heard back from USACE within 45 days, the applicant must still wait for notification from USACE.

28. No activity is authorized under this RGP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

29. Applicants must submit an application to the district engineer if the *mechanical placer mining* activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible

for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the application must state which historic properties might have the potential to be affected by the proposed *mechanical placer mining* activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing applications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the application and these identification efforts, the district engineer shall determine whether the proposed *mechanical placer mining* activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of Section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.

Where the applicant has identified historic properties on which the proposed *mechanical placer mining* activity might have the potential to cause effects and has so notified USACE, the applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA Section 106 consultation has been completed. For non- federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete application whether NHPA Section 106 consultation is required. If NHPA Section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until Section 106 consultation is completed. If the non-Federal applicant has not heard back from USACE within 45 days, the applicant must still wait for notification from USACE.

B. *MINE SITE* INSPECTIONS, COMPLIANCE, AND ENFORCEMENT: (33 CFR Part 326)

1. The Permittee must keep a copy of the permit at the *mine site* for review. The Notice of Authorization must be visibly posted at the *mine site*.

2. The Permittee must allow the DE to inspect the activity to ensure work is being or

has been conducted in accordance with the terms and conditions of this RGP. Refusing access for inspection of the authorized activities is considered permit non-compliance with the terms and conditions of this RGP.

3. Failure to obtain a permit, or to comply with the terms of this RGP, which includes *successful reclamation*, may result in an enforcement or non-compliance action, such as a suspension of work or revocation of the permit. USACE and the Permittee will first work to reach a voluntary mutually satisfactory solution such as obtaining an after-the-fact permit, removal of *dredged and/or fill material,* or other structures, or directed restoration. However, USACE may issue an administrative order requiring compliance if an agreed upon resolution cannot be made. In certain cases, imposition of penalties is provided for under Section 301 of the CWA (33 USC 1319).

C. EXPIRATION (33 CFR 325.2):

1. This permit expires October 31, 2030.

   Operations that have a USACE authorization and are ongoing by the expiration date of the RGP, have an additional 12 months to operate under the terms and conditions of this RGP. The Permittee must also notify USACE of the intent to continue mining.

V. RE-EVALUATION, MODIFICATION, SUSPENSION, AND REVOCATION (33 CFR 325.7):

1. The DE may re-evaluate the RGP and/or any individual authorization verified under the RGP at any time or as circumstances warrant.

2. This RGP may be modified, suspended, or revoked at any time by issuing a Public Notice if the DE finds that the individual or cumulative effects of the authorized activities have an unacceptable adverse impact on the aquatic environment or on the Public Interest.

VI. LIMITS OF THIS AUTHORIZATION AND TO FEDERAL LIABILITY (33 CFR Part 325, Appendix A):

A. LIMITS OF THE AUTHORIZATION: This permit does not grant any property rights or exclusive privileges, does not authorize any injury to the property or rights of others, and does not authorize interference with any existing or proposed Federal Project.

B. LIMITS TO FEDERAL LIABILITY: The Government does not assume liability for:

- Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- Damages to persons, property, or to other permitted or unpermitted activities or

structures caused by the activity authorized by this permit.
- Design or construction deficiencies associated with the permitted work.
- Damage claims associated with any future modification, suspension, or revocation of this permit.

VII. HOW TO APPLY: The Corps of Engineers, Alaska District will accept the Application for Permits to Mine in Alaska (APMA) with the USACE required supplement(s), as a Pre-Construction Notification, pursuant to 33 CFR 320.1 (c). USACE will download APMAs from the ADNR website for review. Applicants also have the option to submit their APMA directly to USACE by sending a complete application to regpagemaster@usace.army.mil.

A. COMPLETE APPLICATION (33 CFR 325.1 (d)): an application is complete and can only be processed when all the following information is submitted:

- **NOTE:** Operations solely on federal lands that fit the terms and conditions of this RGP are *non-notifying.*

1. Provide a 5-year mine plan that includes a description, timeline, location of the operation, and *reclamation* standards for each year of the operation.

2. Current and legible drawings, sketches, or figures with plan views, cross-sections, dimensions (length, width, and depth), and GPS coordinates (latitude/longitude in decimal degrees) for the outer limits of disturbance for the following mine features:
   a. Cuts, settling ponds, processing plants, and berms
   b. Stream *diversions* and *relocations* (including time period used)
   c. Stockpiles: pay material, overburden, and organic material
   d. Access roads: identify new and pre-existing roads
   e. Camps and airstrips

3. Final plans showing how the *reclamation* would meet *successful reclamation* criteria.

- **NOTE:** Providing the Permittee's mine plan on aerial imagery can simplify the USACE review process.

- **NOTE:** Including the USACE Supplement(s) in an APMA submittal can simplify the USACE review process.

B. USACE REVIEW PROCESS

1. Continue using the ADNR Mining website to submit an APMA and consider submitting the USACE supplement(s) with the APMA. Important considerations: filling out the APMA with current, detailed information can result in more timely permitting actions. It is useful to provide pictures of planned *mining sites* with the APMA.
   a. We will contact an operator for additional information or to inform them if a permit is not required. If a *mine site* operator has not been

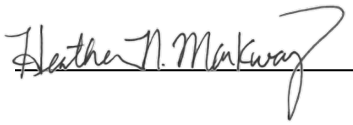
contacted, please reach out to USACE. Work within *WOTUS* cannot commence without USACE authorization. Operators are always welcome to apply directly to USACE by sending an application to regpagemaster@usace.army.mil or calling USACE for more information. For more information, please see the USACE Alaska District Regulatory website: https://www.poa.usace.army.mil/Missions/Regulatory/.

2. There is no application deadline; however, to ensure that an operator receives a permit in time to begin operations, submittal of a complete application by January is encouraged.

   - **NOTE: The APMA is not a USACE permit. To be certain that an operator obtains a USACE permit, contact one of our offices directly at least 60 days prior to starting any mining activity.**

3. No fee will be collected for applying for this RGP.

FOR THE DISTRICT COMMANDER



31 October 2025

Heather N. Markway
Chief, South Branch
Regulatory Division
Alaska District Corps of Engineers

Corps of Engineers Regulatory Division
Alaska District Office & Southeast Field Office

P.O. Box 6898
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THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation
DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/wastewater

September 23, 2025

USACE
Attn: Tyler Marye, Project Manager
P.O. Box 6898
JBER, AK 995060898

Re: USACE, RGP-08 Mechanical Placer Mining GP - Mechanical Placer Mining Activities within the State of Alaska
POA-2014-00055-M2 v1.0, State of Alaska Waters

Mr. Marye,

In accordance with Section 401 of the Federal Clean Water Act and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is issuing the enclosed water quality certification with conditions that the discharge from the proposed project will comply with water quality requirements for dredging and/or fill material in waters of the U.S., authorized by an Army Corps of Engineers (USACE) permit/license POA-2014-00055-(M2) - *Mechanical Placer Mining Activities within the State of Alaska.*

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page https://dec.alaska.gov/commish/review-guidance/ for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the necessary parties to be served under 18 AAC 15.200. Requests must be submitted by the deadline specified in 18 AAC 15.

By copy of this letter, we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.

If you have any questions regarding the attached certification, please contact Willow Weimer at 907-269-6096, dec-401cert@alaska.gov.

Sincerely,

Nick Waldo
Program Manager, Storm Water and Wetlands

Enclosure: 401 Water Quality Certificate

cc: (with encl.)
Olivia Ortiz, USACE
Audra Brase, ADF&G
Todd "Nik" Nichols, ADF&G
Chad Bear, ADF&G
Sarah Myers, ADF&G
Kate Kanouse, ADF&G
USFWS AK Field Offices
Matthew LaCroix, EPA AK Operations
Jeffrey Brittain, EPA AK Operations
Ken Bouwens, ADF&G
Kaitlyn Cafferty, ADF&G

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Water Quality Certification

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a water quality certification with conditions is issued to the USACE, Attn: Tyler Marye, P.O. Box 6898, JBER AK 995060898 for a permit/license to be issued by Army Corps of Engineers (USACE), reference POA-2014-00055-M2 *RGP-08 Mechanical Placer Mining GP – Mechanical Placer Mining Activities within the State of Alaska.*

Based upon the review of the federal application, readily available water quality-related materials, and certification request[1] in accordance with the CWA § 121.5(b) and (c), and 121.7 (c), DEC certifies that if the permittee complies with the terms and conditions imposed by the permit and the conditions set forth in this water quality certification, then it is reasonable for DEC to conclude that the activity will comply with water quality requirements, including applicable requirements of the CWA §§ 301, 302, 303, 306, and 307, Alaska's Water Quality Standards (WQS, 18 AAC 70) and other appropriate water quality requirements of state law.

The scope of certification is limited to the water quality-related impacts of the activity subject to the Federal license or permit (40 CFR 121.3, 18 AAC 15.180). Public notice of the application for this certification was given as required by 18 AAC 15.180 in the DEC Public Notice POA-2014-00055-M2 posted from 07/16/2025 to 08/15/2025.

The General Permit (GP) authorizes miners to place dredged and/or fill material into waters of the U.S., including wetlands and streams, for mechanical placer mining within the State of Alaska, under certain terms and conditions. The GP authorizes a limit of up to 10 acres of disturbance to WOTUS, including wetlands, within the 5-year term of the RGP, unless waived by the Corps of Engineers.

Project Name: RGP-08 Mechanical Placer Mining GP – Mechanical Placer Mining Activities within the State of Alaska

Location: The project site includes all non-navigable waters of the U.S. (WOUTS) within the entire State of Alaska.

Purpose: The purpose of RGP-08 is to streamline the permitting process for mechanical placer mining activities within the state of Alaska in non-navigable WOTUS.

Changes From the Previous RGP-08 (POA-2014-00055-M1):

- USACE will include all relevant agencies on the final mechanical placer mining verification letter distribution lists.
- The previously issued RGP allowed for five (5) acres of wetland/water disturbance at any time, commonly known as a "rolling footprint." This RGP no longer allows for the 5-acre "rolling footprint" of WOTUS disturbance at any time.

*NOTE: A rolling footprint is a common reclamation term in placer mining. It is still applicable for USACE reclamation, but a rolling footprint is no longer used to authorize WOTUS impacts for this RGP.

[1] Reference EDMS Submission Ref Nbr: HQD-XNPN-X2D74, Rcv 7/8/2025 9:13:35 AM

- The total acreage limit for this RGP reissuance is ten (10) acres to WOTUS, including wetlands, within the 5-year term of the RGP (see Section 4(c)).
- This RGP reissuance allows USACE to issue a single, one-time waiver for each single and complete project within the 5-year term of this RGP, which would allow for up to an additional five (5) acres of WOTUS impacts. To qualify, the Permittee must submit sufficient information found within the annual report form demonstrating successful reclamation of at least five (5) acres on the previously disturbed areas authorized under this RGP.
- With the single, one-time waiver for an additional five (5) acres, the total acreage of disturbance to WOTUS authorized under this RGP shall not exceed 15 acres for each single and complete project before the RGP expires on October 31, 2030.
- All mechanical placer mining operations must maintain a minimum 25-foot undisturbed, vegetated buffer from flowing WOTUS. Certain mining activities are exempt from this.
- Changes and additions were made to portions of the General Conditions of this RGP.
- Reclamation, at a minimum, must meet the criteria for successful reclamation and any special conditions included with the verification letter.

Activities Covered by the RGP: Mechanical placer mining activities that involve placement of dredged and/or fill material into WOTUS include:

- Mechanized land clearing; construction of berms or dams; stockpiles
- Stream relocations (permanent); Stream diversions (temporary)
- New mine features constructed in wetlands, such as airstrips, camps, and roads within the mining operation, and culverted crossings of streams or wetland areas.
- Permanent access roads and road extensions outside the mining operation.
- Reclamation activities.
- Exploration activities for placer mining, such as side cast or discharge of dredged and/or fill material for exploratory drill pads, trenches, holes, and bulk samples.
- Ancillary processes associated with placer mining, such as settling ponds, staging mining equipment, etc.
- Deep ripping, to thaw permafrost.

*NOTE: All activities involving discharges of fill and/or dredged materials that impact WOTUS contribute to the 10-acre total WOTUS limit (or 15-acre total if a waiver is granted).

Activities excluded from the RGP:

- Activities in or affecting anadromous fish streams.
- Operations in the Alaska Department of Environmental Conservation's (ADEC) Impaired Waters (Categories 4a, 4b, and 5).
- Temporary mining roads: Roads, for the sole purpose of moving mining equipment, where such roads are constructed and maintained in strict accordance with *Best Management Practices (BMPs)*, are exempt from the CWA (33 CFR 323.4 (a)(6)). A temporary road has a limit of **three years**, by which time it must be completely restored to pre-construction conditions.
- Recreational Mining: Use of certain hand tools, such as a pick, shovel, pan, and/or rocker box, does not require DA authorization.
- Commercial Gravel Operations: Sale of overburden/gravel from a *mine site* is not authorized by this RGP.

- Suction Dredge Mining: Use of a suction device to remove bottom substrate from a water body and then discharge the material from a sluice box to extract gold or other precious metals is not authorized by this RGP.
- Mining/working in or *affecting Navigable WOTUS*.
- Hard Rock or Coal Mining: The process of removing metals or elements within rock is not authorized by this RGP.

Applicant Proposed Mitigation: The Permittee is responsible for providing mitigation measures to avoid, minimize, and Mitigation: The Permittee is responsible for providing mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material. Mitigation requirements will be decided on a case-by-case basis.

Antidegradation Analysis Finding

Pursuant to the Department's Antidegradation Policy and Implementation Methods at 18 AAC 70.015 and 18 AAC 70.016, DEC finds that the project would comply with the requirements for Tiers 1 and 2 regarding water quality impacts to receiving water immediately surrounding the dredge or fill material pursuant to the Corps evaluation and findings of no significant degradation under 33 U.S.C. 1344 and under 40 CFR 230. The use of appropriate best management practices and erosion and sediment control measures would adequately protect the existing water uses and the level of water quality necessary to protect existing uses. Any potential water quality degradation is expected to be temporary, limited, and necessary to accommodate important social and/or economic development in the area.

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge that may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards (18 AAC 70) provided the permittee complies with the terms and conditions imposed by the permit/license and that the following additional measures are adhered to.

Pursuant to 18 AAC 70.020(a) and the Toxics and Other Deleterious Organic and Inorganic Substances in 18 AAC 70.020(b), the following conditions are designed to reduce pollutants from construction activity to ensure compliance with the applicable water quality standards.

Pollutants/Toxics

1. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface water bodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and clean up oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must report the spill to the DEC Area Response Team office online at https://reportspills.alaska.gov/ or via phone: at 1-800-478-9300 or 1-907-269-0667. For Federal reporting requirements, see the National Response Center website: https://nrc.uscg.mil/. For more information, see the DEC Spill Information website: https://dec.alaska.gov/spar/ppr/spill-information/reporting/.

3. Construction equipment shall not be operated below the ordinary high-water mark if the equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected daily for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.
4. Fill material (including dredge material) must be clean soil, sand, gravel, or rock, free from petroleum products and toxic contaminants in toxic amounts.

Turbidity, Erosion, and Sediment Control

5. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement, the material does not show signs of excessive erosion. Indicators of excess erosion include gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.
6. Include the following BMPs to handle stormwater and total stormwater volume discharges as they apply to the site:
    a. Divert stormwater from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils.
    b. Slow down or contain stormwater that may collect and concentrate within a site and cause erosion of exposed soils.
    c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also, place velocity dissipation devices where discharges from the conveyance channel or structure join a watercourse to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.
7. The permittee must stabilize any dredged material (temporarily or permanently) stored on an upland property to prevent erosion and subsequent sedimentation into jurisdictional waters of the United States. The material must be contained with siltation control measures to preclude reentry into any waters of the U.S., including wetlands.

Vegetation Protection and Restoration

8. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation appropriately to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.
9. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be delineated and marked in such a way that equipment operators do not operate outside of the marked areas.
10. Natural drainage patterns shall be maintained, to the extent practicable, without introducing ponding or drying.

Operational Best Management Practices for Placer Mining:

11. The flow of surface waters into the plant site shall be interrupted, and these waters shall be diverted around and away from incursion into the site.
12. Drainage waters within the plant site must be collected in treatment ponds or otherwise prevented from discharging pollutants into waters of the U.S.

13. Berms, including any pond walls, dikes, low dams, and similar water retention structures, shall be constructed in a manner such that they are reasonably expected to reject the passage of water.
14. Measures shall be taken to ensure that pollutant materials from disturbed areas will be retained in storage areas and not discharged or released to the waters of the U.S.
15. Discharges must be managed to prevent resuspension of sediments, excessive erosion of the streambank or streambed, or downstream flooding.
16. The permittee shall take whatever reasonable steps are appropriate to ensure that, after the mining season, all un-reclaimed mine areas, including ponds, are in a condition that will not cause degradation to the receiving waters over that resulting from natural causes.
17. Petroleum products must be properly managed during storage, refueling, and operation to prevent spillage into surface waters or groundwater. Any spills must be cleaned up using materials, such as sorbent pads and booms, and reported.

Date: September 23, 2025

N Waldo

Nick Waldo, Program Manager
Storm Water and Wetlands

APPENDIX A: DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

Definitions

1987 Corps of Engineers Wetland Delineation Manual: The federal delineation manual, dated January 1987, used in the CWA, Section 404 Regulatory Program for the identification and delineation of *wetlands*. The manual requires evidence of *wetland* vegetation, soils, and hydrology in order to determine that an area is a *wetland* (https://www.nwp.usace.army.mil/Portals/24/docs/regulatory/jurisdiction/Wetland_Delineation_Manual.pdf). There are different procedures for conducting onsite delineations, by collecting field data, and offsite determinations, from aerial and *mine site* photos.
2007 Alaska Regional Supplement to the Corps Wetland Delineation Manual: The federal regional guidebook to identifying *wetlands* in Alaska (http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/erdc-el_tr- 07-24.pdf).
Affecting: Any impact that reduces the quality and/or quantity of *anadromous* or impaired waters. Effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components.
Anadromous: Referring to a fish or fish species that spends portions of its life cycle in both fresh and salt waters, entering fresh water from the sea to spawn. In Alaska, examples of *anadromous* fish species include *anadromous* forms of Pacific trout and salmon of the genus *Oncorhynchus*, Arctic char, Dolly Varden, smelts, and sturgeon.
Ancillary features: Features within the *mine site* providing support to the primary activities or operation of an organization, system, etc. *Ancillary features* include airstrips, camps, roads, etc.
At any time: Areas of *wetland disturbance* and/or length of *stream diversion or relocation* can never exceed the limits (unless waived) of the RGP during any point (this includes during a single day), until such time as they are *successfully reclaimed*.
Best Management Practices (BMPs): techniques and strategies designed to prevent or *minimize* pollution, protect natural resources, and promote sustainable practices.
Diversion: A stream channel *diversion* is considered a temporary feature for the purposes of this RGP, with the intent of moving the stream back to its approximate original location. A *diversion* may only be in place for the 5-year term of this RGP and must be reclaimed before the RGP expires on October 31, 2030.
Dredge and fill material: The term *dredged material* means material that is excavated or *dredged* from *waters of the United States*. Any addition, including redeposit other than incidental fallback, of material, including excavated material, into *waters of the United*

States which is incidental to any activity, including mechanized land clearing, ditching, channelization, or other excavation.

The term *fill* material means material placed into *waters of the U.S.* that has the effect of either replacing any portion of a *water of the U.S.* with dry land or changing the bottom elevation of any portion of a waterbody. Examples of "*fill material*" include rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in *waters of the U.S.* The placement of overburden, slurry, tailings, or similar mining-related materials is included in the definition of "discharge of *fill material*" regulated under Section 404 of the CWA (Final Definition of Fill, 2002).

Erosion: Dispersal of soil particles, sediment, or gravel by wind or water. For the purpose of this RGP, *dredge and fill material* must not show signs of *erosion*, beyond the *mine site* and into *waters of the U.S.*

Indicators of excess *erosion* include rills, gullying, head cutting, caving, block slippage, material sloughing, mudflows etc.

Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year. For the purposes of this RGP, *floodplains* and *riparian areas* are used interchangeably.

Functions: The physical, chemical, and biological processes that occur in ecosystems.

Wetland functions include water quality improvement, floodwater storage, fish and wildlife habitat, aesthetics, pollution attenuation, and biological productivity.

Stream *functions* include moderating stream temperatures, filtering sediment and pollutants from surface runoff, slowing flood waters, buffering storm runoff, and reducing peak flows during rain events. Healthy rivers provide aid in natural flood control by absorbing excess rainwater and reducing flood risks downstream, *erosion* reduction, improved water quality by pollution reduction and maintaining healthier environments downstream. Streams play a critical role in nutrient cycling and supporting diverse ecosystems and fish and wildlife habitat.

High flow: Refers to periods when a river or stream carries more water than usual, often due to heavy rainfall or snowmelt.

Impervious surface: A surface where water cannot infiltrate to groundwater. Examples of "*impervious surfaces*" would include roads, buildings, housing developments, parking lots, etc.

Independent utilities: A test to determine what constitutes a *single and complete* project in the USACE Regulatory program. A project is considered to have *independent utility* if it would be constructed absent the construction of other projects in the project area.

Portions of a multi-phase project that depend upon other phases of the project do not have *independent utility*. Phases of a project that would be constructed even if the other phases were not built can be considered as separate *single and complete* projects with *independent utility*.
Mechanical placer mining: The removal of gold or other precious materials from alluvial gravels using mechanized equipment.
Mine Site: All features of a mining operation authorized under "Section I. Activities Covered by the Permit." Each *mine site* encompasses all *ancillary features* and *mined areas*.
Mined areas: The portions of *WOTUS*, including *wetlands*, that have been physically altered or disturbed through mining activities for the extraction of gold or other precious materials. This includes land that has been mechanically cleared, excavated, trenched, etc., resulting in changes to the landscape, soil composition, and natural features in order to access and extract gold and other precious materials.
Minimization: Measures to reduce impacts to *waters of the U.S.*, including *wetlands*. Examples include but are not limited to constructing a drainage ditch around the mine operation to collect and redirect overland flow away from the mine operation; stockpiling organic overburden separately from inorganic overburden for use in *reclamation*; constructing settling ponds to collect sediment laden water within the *mine site*; and using an old creek channel for a stream *relocation*.
Minimization Plan: 33 CFR 325.1 (d)(7) A descriptive statement that explains how an applicant plans to avoid and *minimize* impacts to *waters of the U.S.*
Navigable Waters: Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) *Navigable waters of the U.S.* are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (https://www.poa.usace.army.mil/Missions/Regulatory/Navigable-Waters-of-Alaska/). A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity (33 CFR Part 329.4).
Non-notifying: A *non-notifying* RGP 8 is an activity that does not require a pre-construction notification (PCN) to the U.S. Army Corps of Engineers (USACE). To proceed with a *non-notifying* RGP 8, the project proponent/applicant must operate solely on federally managed lands and *affect* no more than 10 acres of *WOTUS* during the life of this RGP.
Ordinary high water mark (OHWM): The line on the shore established by the fluctuations of water, and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that

consider the characteristics of the surrounding areas (33 CFR 328.3(e) and RGL 05-05).
Reclamation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of mimicking natural/historic aquatic *functions* of a natural/undisturbed site found within the same watershed.
Relocation: A stream channel *relocation* is a permanent (i.e., more than 5 years) realignment including creation of a *stable* bank, stream bed, and *floodplain* connectivity that is similar with respect to upstream and downstream conditions.
Revegetation: Activities that include, but are not limited to, natural *revegetation*, and use of locally available materials, including native seeds, dormant woody cuttings, transplanting, or other methods.
Riparian Areas: *Riparian areas* are the areas bordering rivers and other bodies of surface water. They include the *floodplain* as well as the *riparian* buffers adjacent to the *floodplain*. For the purposes of this RGP, *floodplains* and *riparian areas* are used interchangeably.
Rolling Footprint: Also known as concurrent or phased *reclamation*, involves *reclaiming* parts of a *mine site* while mining operations are still ongoing.
Single and Complete: For non-linear projects, the term "*single and complete project*" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A *single and complete* non-linear project must have independent utility (see definition of "independent utility"). *Single and complete* non-linear projects may not be "piecemealed" to avoid the limits in a general permit authorization.
Stable: Not likely to give way or overturn; firmly fixed.
Successful reclamation/Successfully reclaimed: The point at which all previously mined waters of the United States (WOTUS) have been reclaimed such that temporary impacts are fully reclaimed to pre-construction conditions and there is no loss of *WOTUS*, including *wetlands*, beyond the authorized permanent impacts for *ancillary features*, such as roads, airstrips, etc. *Reclamation* must result in *stable* landforms that are hydrologically functional and demonstrate re-establishment of appropriate stream and/or *wetland* characteristics consistent with the requirements of General Conditions 5–11, as well as any special conditions required during authorization. *Wetlands* are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Final *reclamation* shall not be considered completely successful until written approval is issued by USACE, confirming that the site meets the definition of "*successfully reclaimed*."

Uplands: There is no regulatory definition of *uplands*, except that they do not satisfy *wetland* criteria. An *upland* is missing at least one of these criteria: hydrophytic vegetation, hydric soils, or *wetland* hydrology during the growing season of a typical year. On *mine sites*, *uplands* may include old tailings, camps, roads or airstrips. These areas may have been *wetlands* that were filled under a prior GP or before the CWA. *Mine sites* may also include naturally occurring *upland* areas that do not satisfy *wetland* criteria.
Vegetated buffer: Areas of natural, existing or established vegetation that protect the water quality of neighboring areas and waterbodies during construction. Buffer zones provide an area where stormwater can permeate the soil and replenish the groundwater (WES, 2008). They also slow the flow of stormwater, which helps to filter sediment, decrease soil erosion and prevent streambank collapse.
Waters of the United States (WOTUS): Include all waters listed at 33 CFR Part 328.3. For the purposes of this RGP, this includes *wetlands* and perennial (year-round) and intermittent (seasonal) streams that have a downstream connection to *navigable waters*.
Wetland: An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b)).
Wetland disturbance: Area of disturbance in *wetlands*, measured dimensionally, for example: “x” cubic yards into “x” acres of *WOTUS*. The *wetland disturbance* includes all activities and mine features constructed by placing/redistributing *fill* into *wetlands*. See Section I, “Activities covered by the permit.”

APPENDIX B: BEST MANAGEMENT PRACTICES (BMPs) DURING MINE SITE PLANNING AND OPERATION

The BMPs presented in this document are intended to provide general guidance for effective planning and operation of disturbed areas, including wetlands and aquatic resources. However, not all BMPs will be appropriate or effective for every mine site or operational context. Site-specific conditions, such as hydrology, soil type, topography, vegetation, climate, and equipment limitations, must be carefully considered during project planning. Successful planning and operation require site-specific design of structures and features, and thoughtful placement of materials. An adaptive management approach, where outcomes are regularly monitored and practices are adjusted as needed, is critical to address evolving conditions and ensure long-term reclamation success. Compliance with all applicable federal, state, and local regulations remains the responsibility of the operator.

The purpose of these BMPs is to assist and guide miners in identifying and implementing ways to minimize adverse environmental impacts, particularly to water quality, aquatic resources, and downstream habitats, by promoting site-specific, practicable techniques for controlling runoff, stabilizing disturbed areas, and managing sediment discharges during and after mining operations in order to support compliance with the terms and conditions of this RGP. The information below is not an exhaustive list of available techniques. BMPs referenced in this document may be known by different common names depending on regional practices, agency guidance, or local industry terminology. While the basic functions and principles of these BMPs remain consistent, users should be aware that alternative names may be used in different contexts or guidance materials.

Mine Site Planning: Having a solid mine plan before starting the permitting process is critical to the financial, regulatory, and environmental success of any placer mining operation.

- Winter trails or traveling when the ground is frozen can minimize impacts to wetlands and other aquatic resources, especially when moving heavy machinery.
- Wash all machinery prior to transport to the site to control the spread of invasive species.
- Utilize proper wildlife timing for all mining related activities so that wildlife, such as migratory birds and fish are not harmed by mining activities.
    - For migratory bird windows, please see the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (https://ipac.ecosphere.fws.gov/).
    - For timing recommendations for land disturbance and vegetation clearing, please see the USFWS's recommendations (https://www.fws.gov/media/timing-recommendations-land-disturbance-vegetation-clearingpdf).
- For construction of roads or airstrips borrow material should be taken from upland sources whenever feasible. Please see General Condition 18 above.
- If roads must be placed within waters of the United States (WOTUS), create conditions to maintain hydrology and avoid road washout, such as properly sized

culverts or properly designed low-water stream crossings.
    - For more information on culvert designs, please see the USFWS's Culvert Design Guidelines (https://www.fws.gov/alaska-culvert-design-guidelines).
- Exploration should be conducted to provide valuable information on the lateral and vertical extent of a deposit; gold grades within that deposit; and how much overburden must be removed to reach the pay. This information can be used to avoid and minimize impacts to WOTUS for areas that are not economically viable to be mined.
- When creating a site plan place mine camps, staging areas, and stockpiles, etc., in adjacent uplands, whenever possible.
    - However, the overburden stripped off before mining and the tailings produced during operations should be stockpiled and staged at or near where they would be needed during reclamation, making it easier and less expensive to level, shape, and contour the rock and gravel ahead of covering with organic material that would encourage native vegetation regrowth.
- Early in the planning and exploration process, assess the mine areas for features that could aid in reclamation actions. This includes features such as vegetation borrow sites to assist with revegetating areas or for bioengineered bank stabilization; vegetative mats that can be stripped from areas to be mined to reclaim wetlands, streambanks, and riparian areas; historic upland tailings stockpiles that could provide materials to aid in reclamation; mine site geometry; etc.
    - Ensure borrow sites, vegetative mats, etc., are located in authorized areas and are approved for use by the land managing agency.
    - Use bioengineering to the maximum extent practicable. Bioengineering may include willow layering and transplanting for erosion control. Use what is available on site. Salvage, stabilize, and revegetate with timeliness in mind using phases and seasonal development strategies.
        - Collect cuttings in winter and early spring to use in reclamation activities.
        - Plan to stabilize and revegetate disturbed areas with local, native plants within the same season, as practicable.
- Consider conducting reclamation concurrently with active mining activities (rolling footprint or phased reclamation).
- Plan to create benches and terraces on steep slopes to minimize potential impacts from erosion into adjacent WOTUS.
- Design the mine plan to capture and control sheet flow to minimize erosion and capture sediments.
    - For example: ditches and berms around the mine site leading to settling ponds.
- A series of multiple settling ponds allowing sediment (dirt) to settle out of the water prior to reuse would help lower the quantity and improve the quality of water leaving the mine site. These ponds should be designed to slow the flow of water; the longer the water stays within the pond system, the more opportunity the sediment would have to settle out. The length of the pond system determines the

travel and settling time, and the pond depth determines how much sediment the pond can hold.
- Berms, including any pond walls, dikes, dams, and similar water retention structures should be constructed in a manner such that water is not reasonably expected to overtop and/or compromise the structures.

Construction Sequence: Good site planning and preservation of mature vegetation are imperative for reclamation and controlling runoff water both during and after mining activities. Properly planning and staging major earth disturbing activities can also dramatically decrease the costs of control measures. In addition, the details about the control measures used during construction would provide Permittees with a written record to support these decisions in terms of the placement and design of the on-site control measures, and it would give potential inspectors a way of verifying that the control measures were attempted should failure occur.

Mine Site Operation and Management: Once a robust mine plan has been established, the mine site should be constructed to manage the water and overburden and tailings in a manner that satisfies the terms and conditions of this RGP.

- To help stabilize and control erosion and runoff in the disturbed areas, many features planned for above can be used to control, direct, and guide water at the mine site.
    - Mine site conditions may vary from an operator's plans so adaptive management (see General Condition 11 above) may be needed as the operation progresses (i.e., changes to grading, berms and ditches, location of trenches, etc.).
- Slash piles, i.e., accumulations of natural woody debris (limbs, tops, and smaller pieces) left behind after mechanized land clearing/ stripping of site, may be quickly placed in locations where changes are needed to address immediate runoff/erosion concerns.
- Stockpiled and any other disturbed material should have erosion and sediment BMPs around them to preclude reentry into any WOTUS, which includes wetlands.
    - Approved siltation control measures include, but are not limited to, silt fences, fiber rolls, waddles, coir logs, sediment traps, ditches, berms and settling ponds.
- Steep slopes are especially susceptible to erosion and, where steep slopes would be disturbed on the mining site, applicable practices to minimize erosion from steep slopes include, but are not limited to, reducing continuous length of slope with terracing and benching, reducing slope steepness, roughening slope surfaces (e.g., track walking), and temporary or permanent stabilization.
    - Additionally, operators can use interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, and/or check dams (See Figure 1. Rock check dams) to divert concentrated flows of runoff water away from disturbed portions of the slope. These measures would minimize the amount of runoff flowing across the face of the slope and decrease the erosion of that slope.

Figure 1: Rock check dams in a roadside ditch.
From Mile High Flood District (2024).

- Locate fuel storage areas on state mining claims at least 100 feet from natural occurring water bodies. The Bureau of Land Management (BLM) strongly recommends storing fuel outside of the 100-year floodplain on federal claims.
- Equipment should be inspected regularly for leaks. If leaks are found, the equipment should be repaired immediately to prevent fuel, oil, hydraulic fluid, or any other hazardous material from entering an aquatic resource.
- Refuel equipment away from aquatic resources.
- Increasing the vegetated buffer width, especially on steeper slopes or near sensitive water bodies, can significantly improve the effectiveness of the vegetated buffer.
- Design vegetated buffers to be wider in erosion-prone or hydrologically sensitive areas.

To minimize the impacts of erosion around aquatic resources, these tools may be used:

- Control water volume and velocity to minimize soil erosion and material discharges.
- Control water discharges, including both peak flowrates and total water volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- Minimize the amount of soil exposed during construction activity.
- Minimize the disturbance of steep slopes outside the mining area.
- Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls should address factors such as the amount, frequency, intensity, duration of precipitation; the nature of resulting water runoff; and soil characteristics, including the range of soil particle sizes expected to be present on the site.
- Dissipate water runoff into open vegetated swales and natural depressions to reduce in stream impacts of erosive flows.
- Stabilize all disturbed areas of the site to minimize erosion and sedimentation and the resulting discharge of material. A Permittee should ensure that existing vegetation is preserved, and a natural buffer is maintained wherever possible, and disturbed portions of the site are stabilized. A Permittee should avoid using

impervious surfaces, such as concrete, for stabilization. Applicable stabilization control measures include, but are not limited to:
    - Temporary and permanent seeding;
    - Sodding;
    - Mulching;
    - Rolled erosion control product;
    - Compost blanket;
    - Soil application of Polyacrylamide (PAM).
- Include the following control measures to handle water and total water volume discharges as they apply to the site:
    - Divert water around the site so that it does not flow onto the project site and cause erosion of exposed soils (diverting water around the site can be an effective measure as long as it does not cause flooding and/or erosion offsite);
    - Slow down or contain water that may collect and concentrate within a site and cause erosion of exposed soils;
    - Avoid placement of structural control measures in active floodplains to the degree technologically and economically practicable and achievable;
    - Place velocity dissipation devices (e.g., check dams [See Figure 1. Rock check dams], sediment traps, or riprap) along the length of any conveyance channel (of erodible materials) to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters; and
    - Install permanent water management controls, where practical, so that they are functional prior to construction of site improvements (e.g., impervious surfaces).
- Install appropriate protection measures (e.g. filter berms, perimeter controls, temporary diversion dikes, etc.) to minimize the discharge of sediment prior to entry into inlets located on site or immediately downstream of the site.
- Install appropriate protection measures (e.g. velocity dissipation devices) to minimize the discharge of sediment prior to entry into the water body for water bodies located on site or immediately downstream of the site.

Vegetated Buffers

- Areas of natural or established vegetation that help protect water quality during construction.
- Slow runoff, filter sediment, reduce erosion, and prevent streambank collapse.
- Design vegetated buffers to be broader in erosion-prone or hydrologically sensitive areas.
- Most effective along floodplains, wetlands, streambanks, and unstable slopes.
- May be required by local regulations or permits near sensitive waters (e.g., impaired or exceptional waters).

Soil Stabilization and Erosion Control

- Use biodegradable netting (e.g., jute, sisal, coir) in erosion control products.
- Avoid plastic-based netting; if used, ensure it is wildlife-safe with loose-weave designs.
- Promptly remove temporary erosion controls like silt fences when no longer needed.
- Clearly mark areas of disturbance and no-disturbance to protect surrounding vegetation and sensitive features.
- Preserve existing vegetation and stabilize disturbed soils as soon as practicable.
- Stabilization methods include seeding (temporary/permanent), mulching, geotextiles, and sod.

Phasing and Exposure Minimization

- Minimize the duration of soil exposure by phasing construction activities.
- Limit the area disturbed at one time (e.g., clear/mine 5 acres of a 10-acre site, then reclaim before clearing the remainder of the site).

Sediment Control Measures

- Install sediment controls on all down-slope and side-slope perimeters of disturbed areas.
- Design and maintain controls appropriate to the site (e.g., buffer strips, silt fences).

Interception Berms and Ditches

- Construct berms or swales across slopes to intercept and divert runoff.
- Route water to stable outlets or basins; include check dams (See Figure 1. Rock check dams) on steep slopes.
- Ensure positive drainage to prevent ponding.

Check Dams (See Figure 1. Rock check dams)

- Used in diversions and site ditches to reduce water velocity and channel erosion.
- Remove trapped sediment before dam removal.

Sediment Traps

- Small basins that allow sediment to settle from runoff before it exits the site.
- Located at site discharge points or in drainageways.

Spring Thaw and Site Stabilization

- Stabilize disturbed soils, slopes, ditches, and stockpiles before spring thaw.
- Implement erosion controls in advance where runoff is expected.

General Erosion and Runoff Management

- Control water volume and velocity to minimize erosion and discharges.
- Minimize exposure and disturbance of steep slopes.
- Design erosion controls based on site conditions (soil, rainfall, runoff patterns).
- Divert offsite water around construction areas (without causing offsite impacts).
- Slow or contain onsite water to prevent erosion.
- Avoid structural controls in floodplains where feasible.

- Install velocity dissipation devices (e.g., check dams [See Figure 1. Rock check dams], riprap) in channels.
- Install permanent controls early when possible.
- Divert concentrated flows away from slopes using dikes, drains, swales, etc.

Stabilization Methods

- Use seeding, sodding, mulching, compost blankets, erosion control products.
- Apply gravel base early in areas to be paved.
- Avoid impervious materials for stabilization.

Inlet and Waterbody Protection

- Install sediment controls (e.g., filter berms, diversion dikes) near inlets and waterbodies.
- Use velocity dissipation at discharge points into nearby waters.

    - **NOTE:** Please see Appendix D for Stream BMPs.

APPENDIX C: WETLAND RECLAMATION BEST MANAGEMENT PRACTICES (BMPs)

The BMPs presented in this document are intended to provide general guidance for effective reclamation of disturbed areas, including wetlands and aquatic features. However, not all BMPs will be appropriate or effective for every mine site or operational context. Site-specific conditions, such as hydrology, soil type, topography, vegetation, climate, and equipment limitations, must be carefully considered during project planning. Successful reclamation requires proper planning, site-specific design of structures and features, and thoughtful placement of materials. An adaptive management approach, where outcomes are regularly monitored and practices are adjusted as needed, is critical to address evolving conditions and ensure long-term reclamation success. Compliance with all applicable federal, state, and local regulations remains the responsibility of the operator.

As with during operations, water management is crucial for the wetland reclamation success of a project. Wetlands need to be kept wet, and water managed to reduce erosion. In other words, water needs to be managed to maintain desired water levels and flow regimes in reclaimed wetland areas. Many BMPs/structures mentioned above may be used or left in place to help manage water in reclaimed areas.

Using Media Lunas in Wetland Reclamation (Léger, A., et al., 2023) at Placer Mine Sites

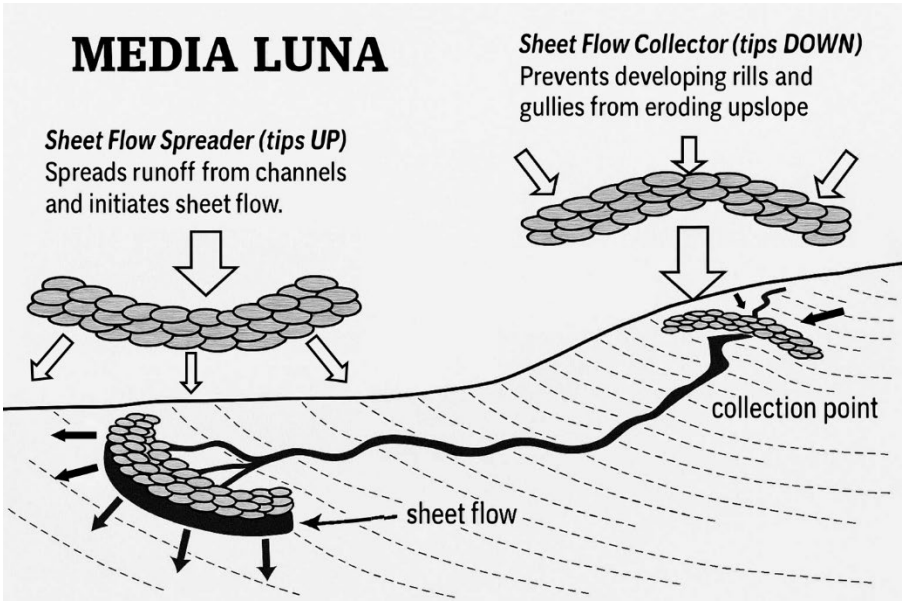

Figure 2: Media Luna Diagram. From USACE (2025)

Uses of Media Lunas in Wetland Reclamation:

- Media Lunas: Crescent-shaped rock structures designed to slow down water flow, spread runoff, and encourage sediment deposition.
    - Tips up media luna is a sheet flow spreader used on relatively flat ground to disperse erosive channelized flow and reestablish sheet flow to spread water across a site.

    - Tips down media luna prevent erosion (i.e. rills/gullies) by collecting sheet flow and creating a transition from sheet flow to channel flow.
- Slow and Spread Water: Install *tips-up* media lunas on gentle slopes to spread runoff and encourage surface saturation, which is ideal for wetland reclamation.
- Retain Moisture in Depressions: Place around recontoured pits or swales to help hold seasonal water and promote wetland vegetation.
- Support Sediment Deposition: Slow flow allows fine sediments to settle, creating better soil conditions for native plant growth.
- Protect Vegetation: Use with vegetative plugs or mats behind the structure to retain moisture and reduce erosion.
- Stabilize Drainage Paths: Helps prevent new rills or gullies from forming on reclaimed floodplains or benches.

Uses of Log Spreaders in Wetland Reclamation:

- Log spreaders, also known as flow spreaders, are wetland reclamation “control feature[s] that slow water flow and spread it evenly along a wide outlet, allowing it to infiltrate naturally into the ground. Built with durable materials and proper grading, it turns concentrated runoff into gentle sheet flow,” enhancing wetland reclamation and protecting the surrounding environment (Philadelphia Water Logs LLC, 2025).
    - Helps capture and distribute water more evenly across floodplains and wetlands.
    - Traps small woody debris and leaf litter.

Figure 3: An example of log spreaders. From NatureBid (2022).

- Water Dispersion and Flow Spreading
    - Help distribute water more evenly across recontoured floodplains and wetlands.
    - Reduce concentrated flow paths that can cause erosion or gully formation.
    - By spreading flow, they encourage sheet flow across vegetated areas,

promoting wetland hydrology.

- Sediment and Nutrient Retention
    - Logs slow water velocity, which allows sediments and organic material to settle behind the structure. This supports soil development, nutrient cycling, and vegetation establishment.
- Habitat Enhancement
    - Logs create microhabitats, such as pools and riffles, which benefit amphibians, invertebrates, and fish (where appropriate).
    - Promote diverse vegetation by holding moisture and fostering different hydrologic zones.
- Support for Vegetative Establishment
    - The slowed, spread-out water helps maintain saturated soil conditions, essential for the reestablishment of hydrophytic plants in wetlands.
- Design Considerations:
    - Proper anchoring is critical to prevent flotation or washout during high flows (e.g., buried logs, cross bracing).
    - Spacing should reflect slope and hydrology: closer spacing on steeper slopes or where erosion is a concern.
    - Use native or untreated wood to avoid chemical leaching and maintain ecological compatibility.
    - Logs can be placed perpendicular or angled to flow depending on the desired effect (e.g., spreading vs. deflecting).
- Other options:
    - Rock Mulch Rundowns: Channels lined with rocks to safely convey water down slopes, reducing gully formation.
    - Brush Weirs: Structures made from branches and vegetation placed across gullies to slow water flow and trap sediment.

Use of organic overburden is another crucial factor in successful wetland reclamation. Proper stripping and stockpiling techniques would help ensure healthy organics to reclaim a site with, proper stockpiling is required by the RGP. Organic soils are rich in nutrients and microbial communities essential for re-establishing wetland vegetation. They help retain moisture and improve soil structure in reclaimed areas.

- If surrounding reclamation site conditions lack good topsoil supplies (possibly the result of historically mined sites), settling pond fines can be used to supplement soil to help promote revegetation.

Properly designed shallow ponds have been a major focus for placer mining reclamation activities and have shown success, but diversity of wetlands is important and the RGP requires all material to be used for reclamation to minimize impacts and reclaim the site to a similar state as before mining operations.

However, ponds, pits, and other disturbed areas do not always need to be completely backfilled. In certain locations these areas may be recontoured below grade to form low-lying floodplains, pockets, depressions, catchment basins**,** and/or swales that can help capture/collect and retain water, encouraging wetland reclamation. Likewise, to help these

areas collect water, adjacent areas should be graded to slope towards these aquatic features.

Key points for pit/pond reclamation:

- Backfill and recontour pit and pond edges into gentle, low-relief landforms (e.g., swales, pockets, and depressions) that blend into the surrounding terrain.
- Design the reclaimed surface to mimic a natural floodplain, especially near stream channels. Broad, flat, and slightly undulating surfaces are ideal.
- Grade surrounding disturbed ground to slope slightly toward the pockets or swales (about 1-2% slope), so runoff or seepage would collect naturally in low areas.
- Avoid steep slopes or sharp berms around depressions. Keep transitions soft and natural-looking to help vegetation establish and reduce erosion.
- Place woody debris or root wads in low spots to create habitat increase roughness and retain moisture longer.
- Leave some small, excavated features partially intact if they are already holding water or staying moist. These features can develop into marshes or sedge meadows (i.e., wetlands) over time.
- Monitor water retention and vegetation. Adjust grading as needed if water is not collecting as planned or if surfaces are drying out too fast.
- Ensure pond bottoms are below the low water table.
- Ensure marsh areas are below the high-water table and, generally, near the low water table.

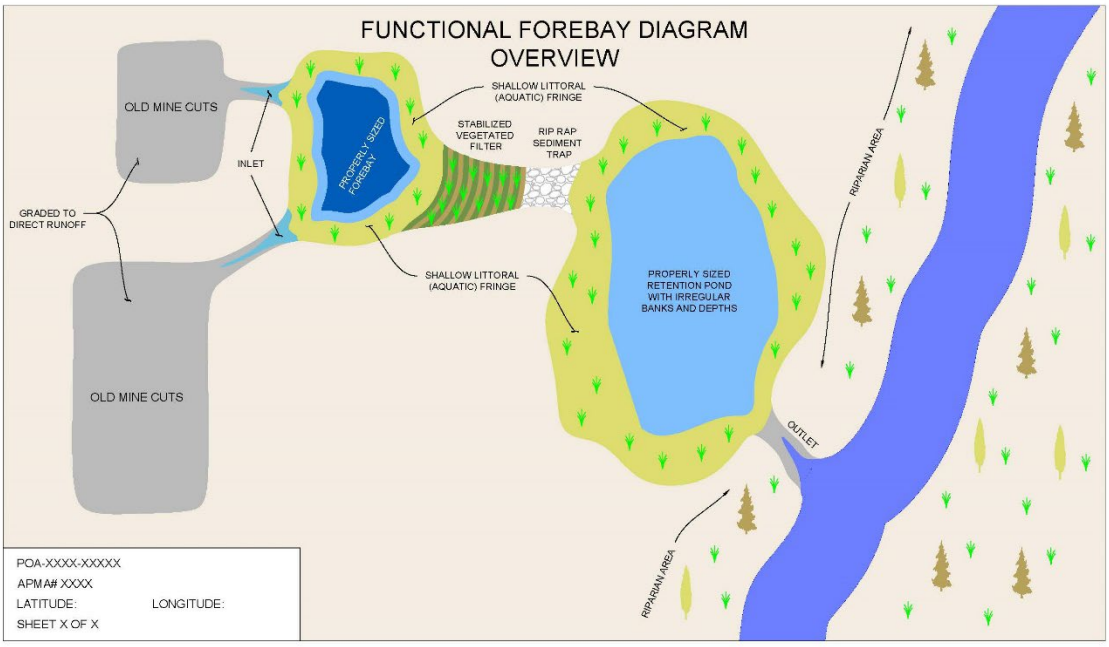

Figure 4: An example of a functional forebay diagram overview plan. From USACE (2025).

Forebays are often found near runoff water ponds, dams, or mining reclamation sites to help manage water quality and prevent erosion. They often consist of a smaller ponded area that is designed to catch sediment. Then it drains/flows into or over a shallow, partially vegetated, stabilized area before then draining into another larger ponded location before return water enters a stream. See example diagrams (Figure 4 & 5).

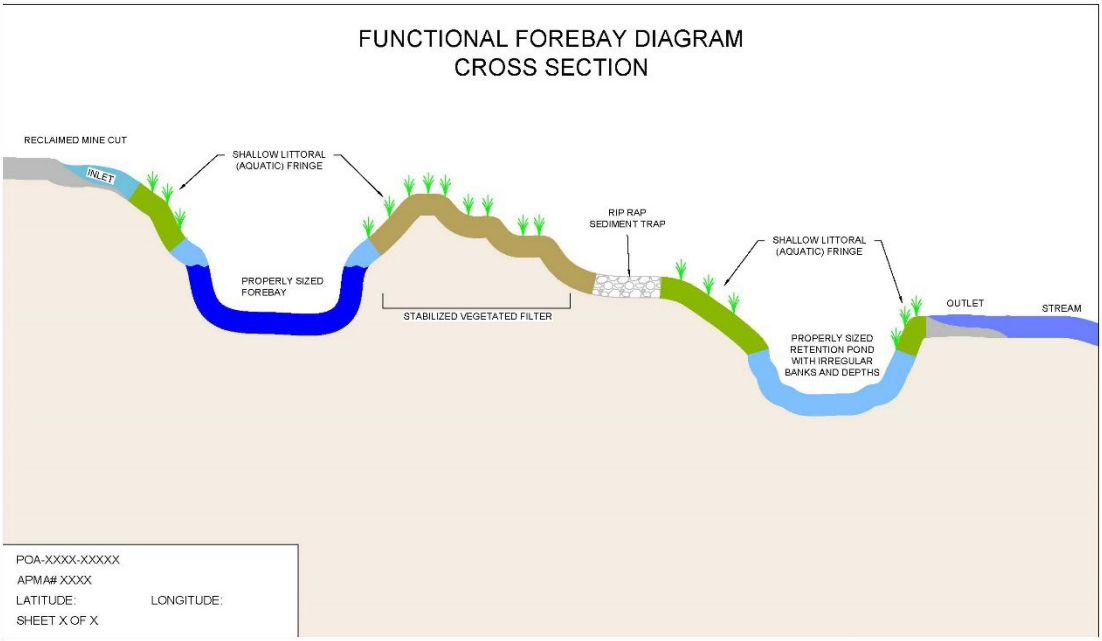

Figure 5: An example of a functional forebay diagram cross section plan. From USACE (2025).

Transplant wings should be positioned perpendicular to the stream flow to reduce flow velocities and encourage deposition. Transplant wings extend from the toe of the streambank and tie into the adjacent hillslope in order to encourage reestablishment of riparian zones. The width of transplant wings and brush bars is typically around 10 to 20 feet.

- For more information, please see the BLM's March 2023 Stream Design and Reclamation Guide for Interior Alaska: Technical Report 65, page 92.

Brush bars are a mix of live and dead cuttings placed on the edge of the streambank perpendicular to the flood flow. Their purpose is the same as transplant wings, to slow flood velocities and encourage deposition. Brush bars are not as robust as transplant wings but are a good substitute on sites where transplants are not plentiful or as a way to augment transplant wings. Another benefit is that brush bars can be installed by hand and do not require the use of heavy equipment. Over time, the brush bars will grow and expand, providing a method for revegetating the riparian zones.

- For more information, please see the BLM's March 2023 Stream Design and Reclamation Guide for Interior Alaska: Technical Report 65, page 93.

Vegetative mats are typically a section of sod composed of native wetland plants (like sedges, mosses, grasses, and rushes), containing intact roots, shoots, and often organic-rich soil, harvested from a healthy donor area (before disturbance or next areas to be disturbed) and reapplied to a reclamation site. It is essentially a living piece of wetland or riparian vegetation moved and replanted to quickly reclaim ecological function.

Key points for vegetative mats:

- Scout the area first to identify healthy, undisturbed wetland or riparian vegetation (sedge meadows, mossy areas, grassy mats). Look for spots with thick root mats and organic-rich soil, ideally before disturbance.
- Use a flat or smooth-edged bucket and avoid sharp teeth, if possible, as they can tear the vegetation. If only a toothed bucket is available, modify the digging technique to minimize root shredding (e.g., shallow skimming instead of deep digging).
- Start by cutting small sections. Lower the bucket and tilt slightly forward, then gently push to slice just beneath the root zone (about four (4) to six (6) inches deep). Aim for chunks about two (2) to three (3) feet wide and as long as manageable (approximately four (4) to six (6) feet). This makes them easier to transport and replant.
- Lift slowly and carefully. Curl the bucket back gently to lift the mat without breaking it apart. Keep the mat horizontal to avoid losing soil or breaking up root mass.
- Stack vegetation-side up. If storing, place the mat in a shaded, moist location, stacked no more than two (2) to three (3) mats deep. Lightly spray with water if needed to keep roots moist, especially during hot/dry periods.
- Label or flag mats if harvesting from different vegetation types (e.g., sedge-dominant vs moss-dominant) to match site conditions during replanting.
- Replant as soon as possible. Place the vegetative mat directly on reclaimed surfaces, press in with bucket or by hand, and tuck soil around edges to ensure good contact and prevent drying out.

Vegetative plugs are smaller than vegetative mats and often contain only one plant species. Plugs should be harvested from a healthy donor community before disturbance with hand tools and/ or excavators. Plugs are particularly well suited for planting in wetlands, constructing grass rolls or being divided into sprigs. Sprigs are the smallest transplant unit, consisting of a single shoot with roots.

Key Point for Plugs:

- Dig a plug with a shovel. A plug may range from two (2) to ten (10) inches in diameter. It is important to include as many roots and as much soil as possible with each plug. Plant plugs so that the new soil level matches the soil level of the donor site. If the planting site is dry, the plug should be planted in the center of a small depression that will catch and retain water. The soil around the plug should be pressed firmly into place.

    - **NOTE:** Please see Appendix D for Stream BMPs.

APPENDIX D: STREAM CHANNEL MANAGEMENT

The BMPs presented in this document are intended to provide general guidance for effective reclamation of disturbed areas, including wetlands and aquatic features. However, not all BMPs will be appropriate or effective for every mine site or operational context. Site-specific conditions, such as hydrology, soil type, topography, vegetation, climate, and equipment limitations, must be carefully considered during project planning. Successful reclamation requires proper planning, site-specific design of structures and features, and thoughtful placement of materials. An adaptive management approach, where outcomes are regularly monitored and practices are adjusted as needed, is critical to address evolving conditions and ensure long-term reclamation success. Compliance with all applicable federal, state, and local regulations remains the responsibility of the operator.

Slope is one of the most important factors in stream reclamation because it directly influences flow energy. Higher slopes increase water velocity and erosion potential, making energy management a critical design goal. Energy can be dissipated by increasing friction and roughness within the channel. Using natural materials and features that slow flow and reduce scour. Stream reclamation designs should prioritize simplicity and be tailored to the specific characteristics of the stream; understanding the river's seasonal flow stages is essential, especially during the construction period. Structural treatments can be either permeable or impermeable. Permeable structures, such as logs, rot wads, or brush bundles, allow water to pass through while reducing velocity and encouraging sediment deposition. In contrast, impermeable structures like rock vanes redirect flow away from vulnerable banks. Where a stream exhibits vertical instability or headcutting, grade control measures should be implemented first, as stabilizing these features is fundamental to the overall success and sustainability of the reclamation effort.

Prevent Entrenchment and Avoid Rosgen F/G Stream Types: Where floodplains are connected to a river and periodically inundated, interactions of land, water, and biology support natural functions that benefit river ecosystems and people. Unless otherwise approved by USACE on case-by-case circumstances, no final stream reclamation should resemble Rosgen F or G stream types.

- Entrenchment refers to the degree to which a river channel is vertically confined within its valley. It is a measure of how easily a river can access its floodplain during high flows.
    - F and G stream types are associated with gorge or canyon valley types and are typically not associated with placer mine sites located in valleys. G and F stream types often lead to prolonged instability and unsuccessful reclamation.
- Avoid deep, narrow, incised channels that lack floodplain connectivity.
    - Construct inset floodplains within confined valleys to allow overbank flow during high water.
    - Incorporate media lunas and log spreaders on adjacent floodplain areas to diffuse and spread high flows, promoting floodplain connectivity.
    - Avoid steep valley walls and entrenched alignments typical of Rosgen F or G types unless natural site conditions require it and USACE has approved it.

- Toe slope stabilization involves reinforcing the base (toe) of an eroded or steep streambank to prevent further vertical and lateral incision. It can use rock or other natural materials (e.g., logs, root wads, rock toes, vegetated lifts) placed along the lower portion of the bank. This technique integrates well with other methods like live stakes, vegetative mats, and boulder cross vanes.

Figure 6: An example of toe slope stabilization. From ERDC's Streambank Erosion and Protection course (2022).

- Promotes Bank Layback:
    - Stabilizing the toe may help provide a firm foundation to reshape the upper banks at a gentler slope, reducing their angle (e.g., from 1:1 to 3:1 or flatter) as water erodes portions above the stabilized toe.
    - This gradual grading mimics natural floodplain profiles and creates benches or terraces.
- Encourage Overbank Flow:
    - As banks become shallower, high flows can more easily overtop the channel, reactivating the floodplain during peak events.
    - Overbank flow supports wetland regeneration, sediment deposition, and energy dissipation.

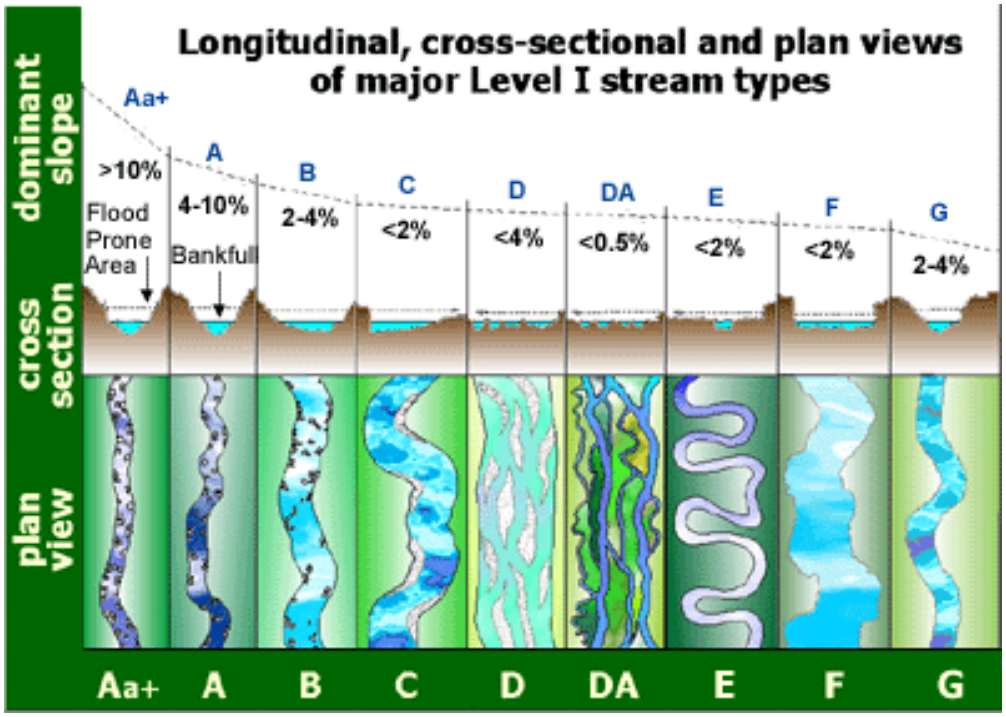

Figure 7: This diagram compares the longitudinal (as seen from the side), cross-sectional (bank to bank), and plan (as seen from above) views of each of the nine major stream types in the Level I classification of Rosgen stream types. From Rosgen, D.L. (1998).

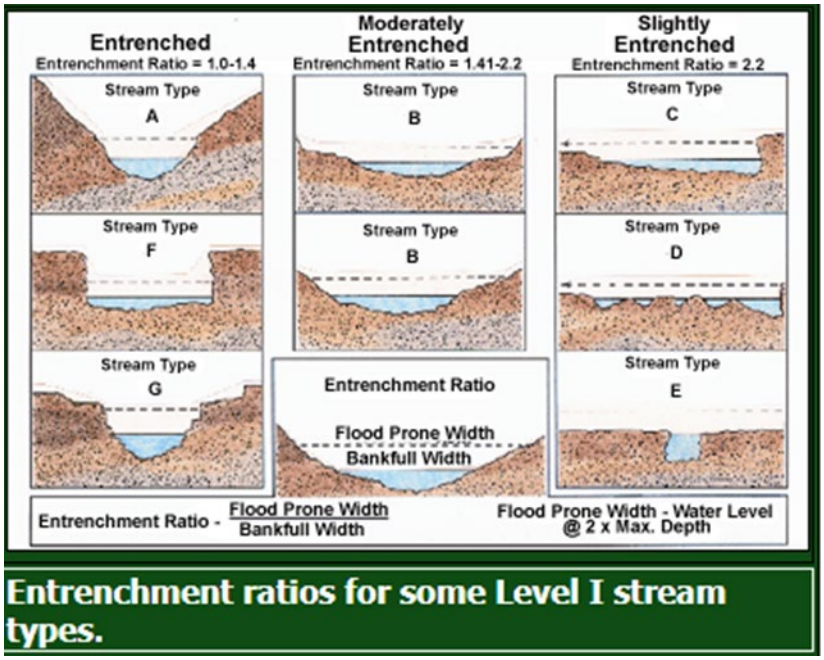

Figure 8: The entrenchment ratio measures how flood-prone the stream is based on how high the channel is. A high ratio (>2.2) indicates slightly entrenched rivers, or rivers that easily flood. A low ratio (1-1.4) indicates highly entrenched streams, or streams that would have trouble escaping their banks. From Rosgen (1994).

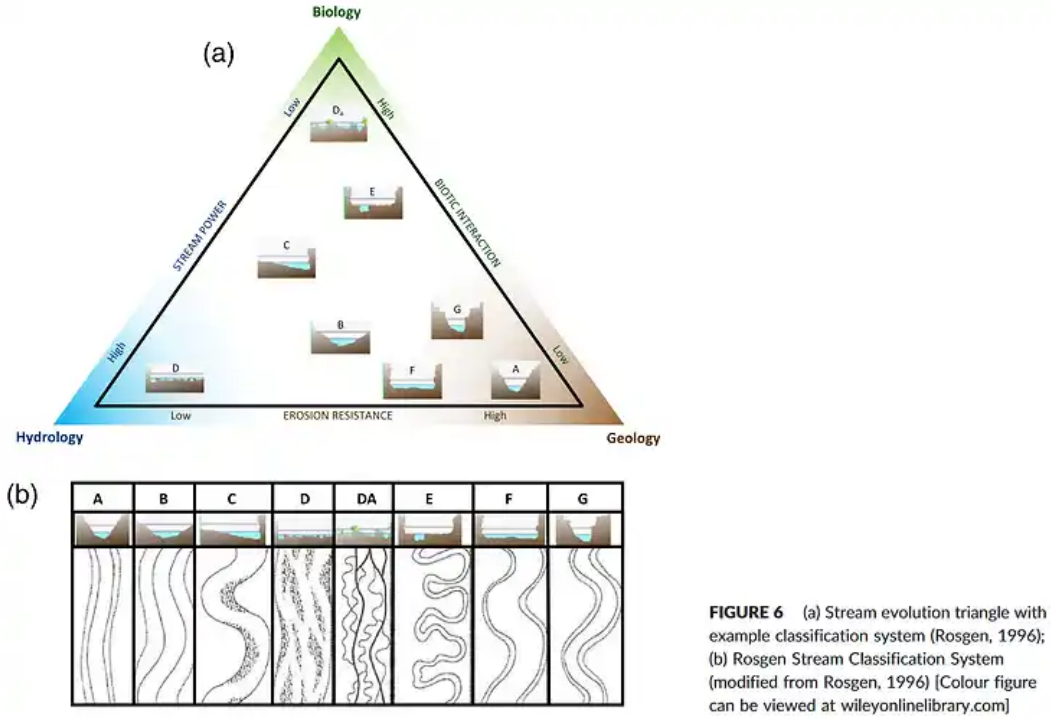

FIGURE 6 (a) Stream evolution triangle with example classification system (Rosgen, 1996); (b) Rosgen Stream Classification System (modified from Rosgen, 1996) [Colour figure can be viewed at wileyonlinelibrary.com]

Figure 9: The Stream Evolution Triangle (SET) represents the relative influences of geology (erosion resistance), hydrology (stream power), and biology (biotic interaction). From Castro and Thorne (2019).

Bedform Diversity: Diverse stream beds dissipate stream energy, contribute to channel stability, and provide a suite of habitats needed by many fish species.

- Promote hydraulic complexity and aquatic habitat.
    - Construct riffle-pool or step-pool sequences using a mix of gravels, cobbles, boulders, and logs placed irregularly to break up uniformity.
    - Use root wads, woody debris, and boulder clusters to create microhabitats and flow variation.
    - Mimic natural stream substrate heterogeneity. Do not grade streambeds smooth or uniform.
    - Where feasible, install log weirs or cross-vanes to concentrate flow in riffles and maintain pool depth.
- To remain in compliance with this permit the stream bed should contain variations in bed materials, such as gravel, sand, rocks, logs, root balls/wads and boulders, as well as different patterns and shapes of sediment deposition. Substrate may not appear uniform or organized while creating riffle/step-pool sequences or other in-stream structures.

Stream Sinuosity (K ≥ 1): Sinuosity serves as a key indicator of river health, behavior, and the interactions between water and landforms, with implications for ecology, hydrology, and human activities. Stream channel sinuosity (K) is calculated by dividing the length of the selected stream channel (Ls) by the straight-line distance between the end points of the selected channel reach (Lv). Unless otherwise approved by USACE on case-by-case circumstances, no stream relocation or diversion will result in channelization.

- Prevent channelization and ensure natural meander development.
    - Design reclaimed channels with sinuosity greater than (≥) 1.0.
    - Layout channels using topographic maps and pre-disturbance alignments to guide natural meanders.
    - Use woody debris or flow deflectors to promote channel curvature and reduce straight-line flows.

Figure 10: Sinuosity of a stream. From Rosgen (1998).

Riparian Vegetation Establishment: Riparian vegetation improves functions for water quality and channel stability of streams. The requirement is the re-establishment of a 35-foot wide, vegetated riparian area above the ordinary high water mark (OHWM), adjacent to the stream channel, unless otherwise approved by USACE on case-by-case circumstances.

- **NOTE:** OHWM is the USACE's jurisdictional limit under Section 404 of the CWA. See the Wetlands Regulatory Assistance Program (WRAP) National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams Final Version (January 2025), https://erdc-library.erdc.dren.mil/items/76c61f8f-6d75-4a35-aaf3-39aa64918afb.

- Stabilize banks and support channel functions.

    - Harvest vegetative mats before mining and transplant post-mining along the OHWM to jumpstart revegetation.
    - Apply native seed mixes and dormant woody cuttings (e.g., willow stakes) on streambanks and riparian zones.
    - Use biodegradable erosion control blankets to retain moisture and promote seedling growth.
    - Plant in rows perpendicular to the flow to reduce shear stress and trap sediments.
        - Make sure to leave small paths/tracks to allow for adaptive management need be.
    - Establish a minimum 35-foot vegetated buffer above OHWM and monitor plant coverage over three (3) to five (5) seasons:
        - By the end of three (3) growing seasons, riparian areas should have 30% live native plant cover.
        - By the end of five (5) growing seasons, riparian areas should have 70% live native plant cover.
- As stated in Appendix B, transplant wings and brush bars are tools that should be considered for in-stream reclamation as well.
- Transplant wings should be positioned perpendicular to the stream flow to reduce flow velocities and encourage deposition. Transplant wings extend from the toe of the streambank and tie into the adjacent hillslope in order to encourage reestablishment of riparian zones. The width of transplant wings and brush bars is typically around 10 to 20 feet.
    - For more information, please see the BLM's March 2023 Stream Design and Reclamation Guide for Interior Alaska: Technical Report 65, page 92.
- Brush bars are a mix of live and dead cuttings placed on the edge of the streambank perpendicular to the flood flow. Their purpose is the same as transplant wings, to slow flood velocities and encourage deposition. Brush bars are not as robust as transplant wings but are a good substitute on sites where transplants are not plentiful or as a way to augment transplant wings. Another benefit is that brush bars can be installed by hand and do not require the use of heavy equipment. Over time, the brush bars will grow and expand, providing a method for revegetating the riparian zones.
    - For more information, please see the BLM's March 2023 Stream Design and Reclamation Guide for Interior Alaska: Technical Report 65, page 93.

Velocity Dissipation and Grade Control: Place velocity dissipation devices (e.g., check dams (See Figure 1. Rock check dams), boulder cross veins, riffle pool complexes, or other grade control structures) along the length of any conveyance channel to provide a non-erosive flow velocity dissipator. Also place velocity dissipation devices where flows from the conveyance channel join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank, and downstream waters.

- Prevent erosion and reduce channel incision.
    - Install rock check dams (See Figure 1. Rock check dams), media lunas, or natural log grade controls at intervals based on slope and flow rate.
    - Build boulder cross-vanes or constructed riffles to create energy dissipation

zones and mimic natural steps.

- Use step-pool sequences in steeper reaches to prevent headcutting and maintain grade.
- Place spreader logs or rock aprons at channel junctions and outfalls to dissipate flow and protect embankments.
- Ensure grade control structures are embedded below the streambed to prevent undercutting.

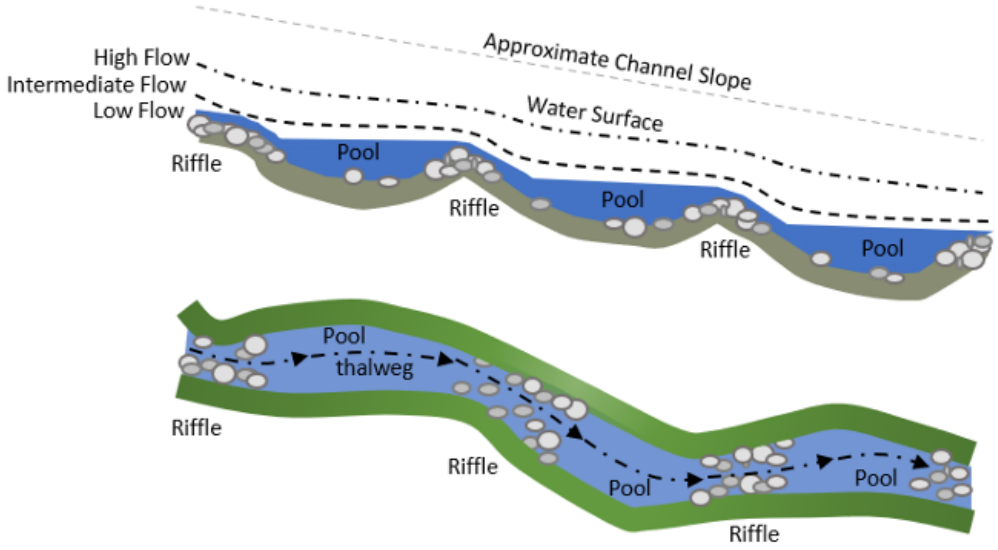

Figure 11: Diagram of a riffle-pool sequence. Adapted from Dunne & Leopold (1978).

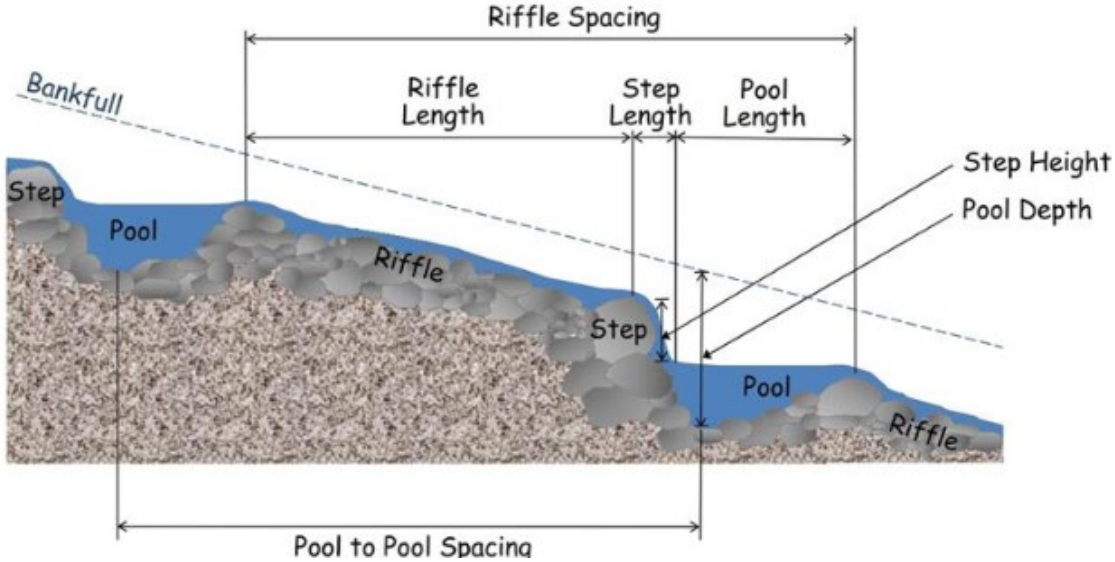

Figure 12: Additional diagram of a riffle-pool sequence. Adapted from Thompson, D.M. (2018).

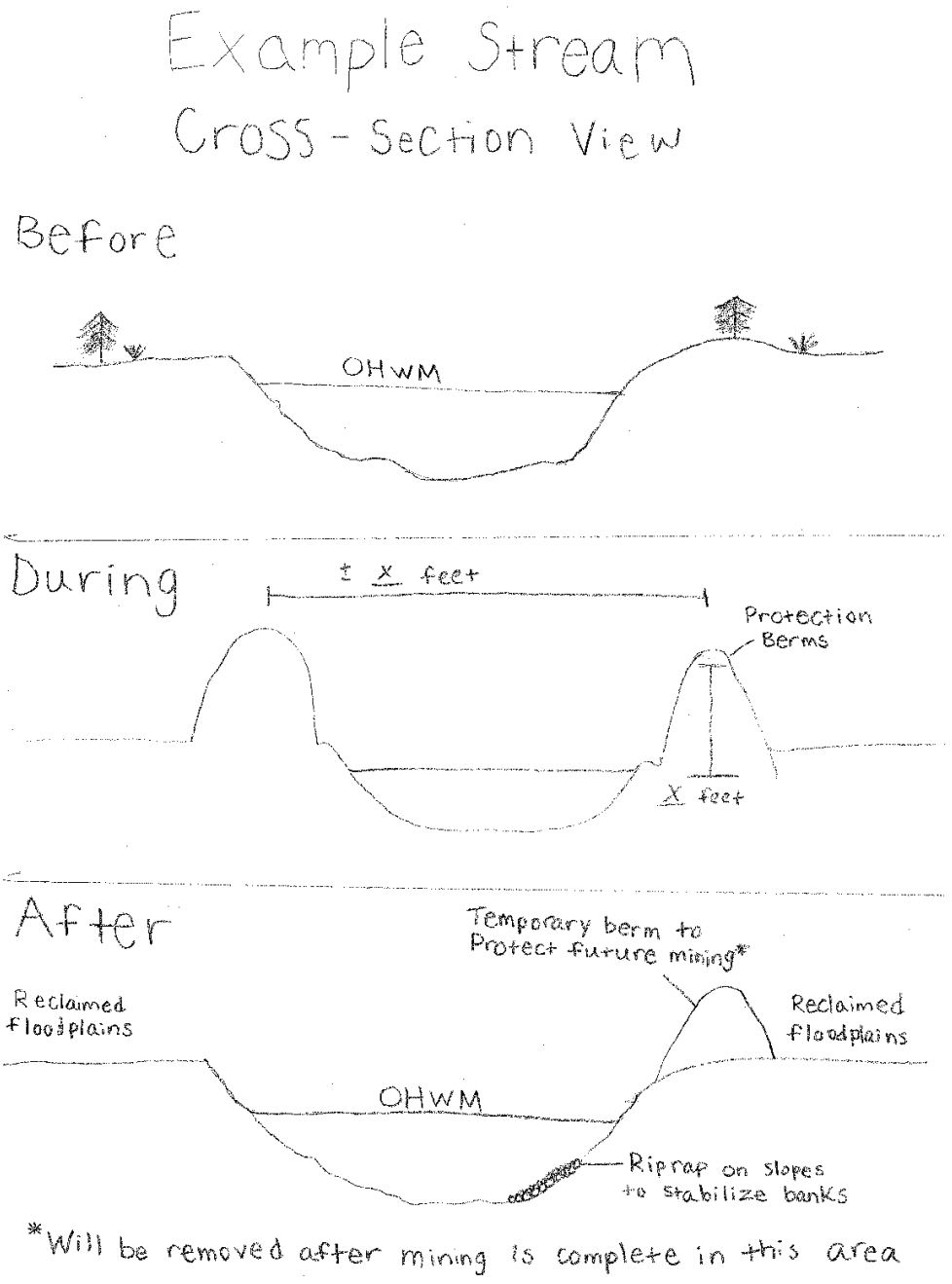

Figure 13: Example drawing of a cross-section view of a stream. From USACE (2025).

Monitoring & Adaptive Management

- Track plant survival with annual monitoring reports and supplement if vegetation fails to meet standards.
- Inspect grade controls during spring melt and after storm events; repair or adjust structures as needed.
- **Submit the annual report to USACE by December 31 of each calendar year!**

Key points for stream management:

- Prevent vertical incision and entrenchment.
- Reconnect floodplains and restore overbank flow.
- Promote channel stability and bedform diversity.
- Maintain stream sinuosity and reduce erosion.
- Reestablish native riparian vegetation.

    - **NOTE:** To obtain information on appropriate BMP techniques based on the site's fluvial landscape, please contact a local BLM office (https://www.blm.gov/office/alaska-state-office), or refer to the BLM Stream Design and Reclamation Guide for Interior Alaska (Harmon, W., M. Varner, E. Lamb, and D. McLeod, 2023), commonly referred to as BLM Technical Report 65.

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USACE Supplement 1 - **Mine Site Baseline Photos**

US Army Corps of Engineers®
Alaska District

Aerial Photos: As stated in Section 7(A)(3) of the RGP to assist with permitting efficiencies, it is strongly encouraged to provide:

- Recent (within the last five (5) years) aerial/drone photos of the mine site, sourced from Google Earth, Bing Maps, or other aerial viewing software. Images must be clear, sharp, and reproducible. Draw the current operation and the projected 5-year mine footprint on the photos.

Ground Site Photos and Information: Please provide the following; photos should be attached with the supplement responses:

- Latitude and Longitude in decimal degrees (DD) for the following:
  - o All four (4) corners of the proposed mine site (not the ADL). (e.g., 61.1849, -149.9990)

  - o Mine features, such as ponds, roads, trenches, etc.

- Photos from the four (4) corners of the proposed mine site, with the field of view pointing towards the direction of proposed mine site. Drone imagery may be substituted for ground photos if drone imagery is of sufficient quality.
- Photos of vegetation communities taken during the growing season throughout the mine site where mining would occur.
- Photos of the soil layers under each vegetation community. A hole would need to be dug with a bucket or shovel. Include an object, such as a shovel, for scale.
- Photos demonstrating hydrology.
  - o Stream photos where mining would occur, including upstream and downstream view of the stream, the banks, and the floodplain.

♦ **NOTE: If a jurisdictional determination is requested, the operator must provide all of the information above.**

Existing Site Conditions and History

• Has the site been previously mined?	No	Yes	Unknown
• If so, when?			
• Was the site reclaimed?	No	Yes	Unknown
• If so, when?			
• Are there existing tailing piles on site?	No	Yes	Unknown
• Are you only working in old tailing piles?	No	Yes	Unknown

USACE Supplement 2 - **Site Avoidance and Minimization Plan:**

US Army Corps of Engineers®
Alaska District

For activities involving discharges of dredged and/or fill material into waters of the United States (WOTUS), the application **must** include a statement describing how impacts to WOTUS are to be avoided and minimized (33 CFR 325.1 (d)(7)). For more examples of avoidance and minimization, please see Appendix B: Best Management Practices (BMPs) During Mine Site Planning and Operation, of RGP-08. The following measures may be implemented to avoid and minimize impacts to WOTUS:

Check all that apply to your operation:

Utilizing winter trails or traveling when the ground is frozen especially when moving heavy machinery.

Washing all machinery prior to transport to the site to control the spread of invasive species.

Utilizing proper wildlife timing for all mining related activities so that wildlife, such as migratory birds and fish, are not harmed by mining activities.

- For migratory bird windows, please see the United States Fish and Wildlife Service Information for Planning and Consultation (IPaC) tool (https://ipac.ecosphere.fws.gov/).

Borrow material should be taken from upland sources whenever feasible.

Creating conditions to maintain hydrology and avoid road washout, such as properly sized culverts or properly designed low-water stream crossings.

Exploration would be conducted prior to the mining operation.

Placing mine features, such as camps, stockpiles, etc., in uplands adjacent to WOTUS.

Considering reclamation techniques prior to mining to inform where the operation should begin.

Conducting reclamation concurrently with active mining activities (rolling footprint or phased reclamation).

Creating benches and/or terraces on steep slopes to minimize potential impacts from erosion into adjacent WOTUS.

Designing the mine plan to capture and control sheet flow to minimize erosion and capture sediments.

Other:

Compensatory Mitigation: The application must also include either a statement describing how impacts to WOTUS are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts (33 CFR 325.1 (d)(7)).

Select one of the options below or provide a statement describing how impacts to WOTUS are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.

Option A – Permittee Responsible Mitigation (PRM) will be conducted.
Provide a PRM plan, in accordance with 33 CFR 332.4(c).
Option B – Compensatory Mitigation will be addressed by purchasing credits from an approved banking instrument (i.e., Mitigation Banks or In-Lieu Fee programs).
Option C – Compensatory Mitigation is not being proposed for this project because:

USACE Supplement 3 - **Additional Stream Information**

- Provide the coordinates in DD for the start and end of a stream diversion/relocation PRIOR to this portion of the work starting (if not already completed in Box 26 of the APMA).

Start:

End:

- Provide photos of the area where the start and end of a stream diversion/relocation would be located PRIOR to this portion of the work starting.

- Provide the existing stream conditions in feet (ft.), including the stream's width, depth (average), and total length of the portion of the stream to be moved (if not already completed in Box 26 of the APMA).

Width (ft.):

Depth (ft., average):

Total Length (ft.):

- Document the proposed stream diversion/relocation final conditions, including the width, depth (average), and total length of the portion of the moved stream (if not already completed in Box 26 of the APMA).

Width (ft.):

Depth (ft., average):

Total Length (ft.):