May 29, 2018

Mr. Jamie R. Hyslop
U.S. Army Corps of Engineer
Alaska District CEPOA-RD-Hyslop
P.O. Box 6989
JBER, AK 99506-0898
Via E-mail: POA.donlingoldeis@usace.army.mil

Re: Donlin Gold Compensatory Mitigation Plan

Dear Mr. Hyslop,

Thank you for the opportunity to comment on the Donlin Gold proposed Compensatory Mitigation Plan. These comments are submitted on behalf of Earthworks, Earthjustice, Northern Alaska Environmental Center and Cook Inletkeeper.

Cook Inletkeeper is a community-based nonprofit organization formed in 1995 by concerned Alaskans to protect the Cook Inlet watershed and the life it sustains. Northern Alaska Environmental Center is an Alaska-based conservation organization dedicated to protecting the land, waters and wildlife of Interior and Arctic Alaska for current and future generations to use and enjoy. Earthworks is a national non-profit organization dedicated to protecting communities and the environment against the adverse effects of mining, while promoting sustainable solutions. Earthjustice is a non-profit environmental law firm wielding the power of law and the strength of partnership to preserve the wild, to fight for healthy communities and to advance clean energy for a health climate.

In general, we are concerned that the proposed Compensatory Mitigation Plan lacks sufficient information to determine whether wetland losses will be adequately compensated by the proposed mitigations. As a result, Donlin should be required to provide additional information, and apply for a new Section 404 permit. The CMP and final mitigation plans should be re-noticed, with a public comment period in accordance with the 2008 Mitigation Rule. Please see the attached technical comments for more detail.

Sincerely,

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Technical Report
A preliminary review of Donlin Gold LCC's Final Compensatory Mitigation Plan

The report has been done on behalf of Earthjustice, Earthworks, Northern Alaska Environmental Center and Cook Inletkeepers.

Prepared by Jessica Kayser Forster, MS. Sustainable Growth Solutions, Alaska

This report is a preliminary review of Donlin Gold LCC's Compensatory Mitigation Plan as it relates to specific elements of the 2008 regulation, Compensatory Mitigation For Losses of Aquatic Resources (33 CFR Part 332 and 40 CFR Part 230, subpart J).

Donlin Gold, in accordance with Clean Water Action Section 404 (b)(1) permit guidelines, submitted a compensatory mitigation plan as Appendix M, along with Department of Army Permit POA-1995-120 (Appendix J) as a part of the permittees Final Environmental Impact Statement to the Army Corps of Engineers, April 2018.

This report is specific only to the permittee's final compensatory mitigation plan as it relates to specific elements of the 2008 regulation. It does not offer insight nor opinion on any other aspect of Donlin Gold's EIS. Additionally, this report does not reflect the views of any of the ILF program and mitigation bank sponsors, agency personnel, and/or other Section 404 permittees with whom I have worked or currently work. The comments and considerations within are those of Sustainable Growth Solutions, Alaska.

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INTRODUCTION

As part of Donlin Gold LLC's final Environmental Impact Statement, Donlin Gold has submitted an application for the Department of the Army (DA) Permit for the Donlin Gold Project (POA-1995-120), pursuant to Section 404 of the Clean Water Act (Section 404) and Section 10 of the Rivers and Harbors Act of 1899 (Section 10) to the United States Army Corps of Engineers (USACE). The final permit application is Appendix J of the EIS document.

As part of the Section 404(b)(1) permit guidelines — when there are unavoidable impacts to aquatic resources of significant function, it is the responsibility of the applicant to identify and specify the desired mechanism to carry out the compensatory mitigation and to develop a final mitigation plan. In DA permit POA-1995-120 (Appendix J of the EIS), the applicant is proposing Permittee Responsible Mitigation using a Watershed Approach as the mechanism to carry out the compensatory mitigation and has submitted a final compensatory mitigation plan (CMP) (Appendix M of the EIS). Compensatory mitigation being carried out by Permittee Responsible Mitigation using a watershed approach is regulated under the 2008 regulation entitled Compensatory Mitigation For Losses of Aquatic Resources (The 2008 Mitigation Rule) (33 CFR Part 332 and 40 CFR Part 230, subpart J). The 2008 Mitigation Rule set standards that have to be met by the three different compensatory mitigation mechanisms (Mitigation Banks, In Lieu Fee Programs, and all forms of Permittee Responsible Mitigation (PRM) (PRM under a watershed approach, PRM through on-site and in-kind mitigation, and PRM through offsite and/or out-of-kind mitigation) in order to be approved by the US Army Corps of Engineers (USACE) to take on the mitigation liability and carry out the compensatory mitigation activities.

This report is a preliminary review of Donlin Gold LCC's Compensatory Mitigation Plan (CMP) and how certain sections relate to specific elements of the 2008 regulation, Compensatory Mitigation For Losses of Aquatic Resources (33 CFR Part 332 and 40 CFR Part 230, subpart J).

EXECUTIVE SUMMARY

During the 1980s and 1990s, researchers and on-the-ground implementers began to raise questions whether compensatory mitigation was being successfully implemented and whether it was effectively offsetting permitted impacts, especially for wetland impacts. In response to these concerns, the EPA asked the National Research Council (NRC) to conduct an in-depth, independent evaluation of wetland compensatory mitigation in the CWA Section 404 permit program. In 2001, NRC published its detailed findings and recommendations. The NRC's report highlighted the numerous challenges encountered in successfully implementing wetland compensatory mitigation projects (IWR. 2015).

Based on the findings in the NRC report and recognizing the need to strengthen rules governing wetland compensatory mitigation and the standards and requirements that apply to the various compensatory mitigation providers, Congress enacted Section 314 of the National Defense Authorization Act (NDAA) for fiscal year 2004 (Public Law 108-136). Section 314 of the NDAA required the Secretary of the Army, acting through the Chief of Engineers, to issue regulations to improve compensatory mitigation options. Congress directed that the regulations: maximize available credits and opportunities for compensation for wetland losses, provide flexibility for regional variations in wetland resources and their associated functions and services, and apply equivalent standards and criteria to all providers of mitigation (mitigation banks, in-lieu fee programs and permittee responsible mitigation plans) (IWR. 2015).

In 2008, the USACE and the Environmental Protection Agency (EPA) published regulations entitled Compensatory Mitigation For Losses of Aquatic Resources (The 2008 Mitigation Rule) (33 CFR Part 332 and 40 CFR Part 230, subpart J).

The failures of compensatory mitigation projects undermine the public's trust and confidence in the mechanisms providing the mitigation and the permitting processes that authorize them. The 2008 Mitigation Rule was written to improve compensatory mitigation outcomes and ensure the regulated public that permitted unavoidable impacts to aquatic resources of significance will be offset and specific mechanisms are put in place to ensure that mitigation outcomes are achievable and successful.

Since 2015, the USACE, Alaska District (Alaska District) has taken considerable steps to bring the district's Compensatory Mitigation Program into compliance with the 2008 Mitigation Rule while also balancing the 1994 Alaska Wetland Initiative. Currently, Mitigation Banks and ILF programs operating throughout the state are ceasing credit sales and updating their program's legal Instruments in order to uphold the regulation. The Alaska District is requiring more substantiated information in order to gain approval of program Instruments and final mitigation plans. Additionally, the Alaska District has put effort into drafting a workable credit-debit method for the state of Alaska that supports the intent of the 2008 Mitigation Rule by incorporating important factors — including functional assessments, time lag, risk, and type of mitigation being proposed— into debit and credit determinations.

If approved, the Donlin Gold's final CMP sets a dangerously low standard for PRM using a watershed approach. As written, the CMP puts the District Engineer (DE) into the very difficult position of assuring the regulated public that enough information was required of the permittee in the development of the CMP and project specific mitigation plans to ensure the compensatory mitigation identified will offset unavoidable permitted impacts to the losses of significant aquatic resource functions documented in the EIS while also providing a level of information equivalent to that of what is being asked of third party mitigation providers operating in the Alaska District and/or working to seek approval to sell credits in Alaska (a key component of the 2008 Mitigation Rule).

Therefore the DA permit POA-1995-120 and accompanying final mitigation plans for the proposed PRM compensatory mitigation projects should not be approved in the record of decision for the project EIS until additional requirements are met. The applicant should address the efforts put forth by the Alaska District to ensure successful compensatory mitigation outcomes by updating the CMP to meet the 2008 Mitigation Rule standards and the standards that mitigation banks and ILF programs around the state are being required to uphold.

The following components of the 2008 Mitigation Rule call into question the completeness of Donlin Gold's PRM CMP (Appendix M), and the final mitigation plans for the Upper Crooked Creek (Attachment D of Appendix M) and Chuitna Preservation Area (Attachment E of Appendix M) projects:

- Mitigation hierarchy (33 CFR Part 332.3(b)/40 CFR Part 230.93(b)),
- Watershed approach (33 CFR 332.3(c)/40 CFR 230.93(c)),
- Fundamental elements of a mitigation plan (33 CFR 332.4(c)/40 CFR 230.94(c)),
- Congressional mandate and intent of the 2008 Mitigation Rule — establishment of equivalent standards for each type of compensatory mitigation: mitigation banks, in-lieu fee programs, and PRM.

Based on my professional experience working with the Alaska District's Compensatory Mitigation Program over the past seven years and for reasons that will be stated within this report, once Donlin Gold has identified compensatory mitigation sites using a watershed approach that meet the mitigation hierarchy and has developed a final mitigation plan for each compensatory mitigation site, Donlin Gold should apply for a new Section 404 permit. The CMP and final mitigation plans should be public noticed with a public comment period in accordance with the 2008 Mitigation Rule.

REVIEW CONSIDERATIONS

Watershed approach (33 CFR 332.3(c)/40 CFR 230.93(c))

> *Watershed approach* means an analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by activities authorized by [Department of the Army (DA)] permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements for DA permits (2008 Mitigation Rule definition).
>
> The goal of a watershed approach is to maintain and improve the quality and quantity of aquatic resources within watersheds through the strategic selection of compensatory mitigation sites. The level of information needed to support a watershed approach (33 CFR 332.3(c)) should be commensurate with the proposed impacts to aquatic resources (2008 Mitigation Rule).
>
> The watershed size selected should not be larger than is appropriate to ensure that the aquatic resources provided will effectively compensate for impacts resulting from activities authorized by DA permits. The DE should consider relevant environmental factors and appropriate locally developed standards and criteria when determining the appropriate watershed scale for compensation activities. file://localhost/(https/::www.epa.gov:sites:production:files:2015-07:documents:watershed_approach_handout.pdf).

The watershed approach requires the mitigation provider to determine a specific watershed size to conduct the watershed analysis. The watershed size selected by Donlin Gold in its PRM CMP is confusing and does not address the specific considerations written in the 2008 Mitigation Rule Based on the PRM final mitigation plan, Appendix B, section 6.0 Evaluation of Compensatory Mitigation Options, it seems the applicant selected to use a 10-digit HUC watershed size scale analysis to identify the Upper Crooked Creek (UCC) compensatory mitigation project. If this is the case, Donlin Gold should provide additional information to complete a full watershed approach analysis of the 10-digit HUC (See the end of this section for specific information to be included in the analysis). However, the applicant also states the compensatory mitigation is on-site and in-kind and therefore the sites have been picked accordingly. It is unclear to the reader if the UCC projects were chosen using a watershed approach or by implementing on-site and in-

kind mitigation. The applicant should clarify and provide any necessary documentation to better explain the watershed approach used to determine the UCC project.

Section 6 goes on to read that once Donlin Gold exhausted options available in the 10 Digit HUC watershed, the permittee: "followed USACE guidelines in considering the proximity of specific opportunities to the impacted watershed, by first considering those within the middle Kuskokwim River watershed and then expanding out co-centrically, eventually extending to the entire Yukon-Kuskokwim (Y-K) region and then to other watersheds in Alaska (EIS. Appendix M)." This sentence implies to the reader that the watershed size boundary analyzed to identify other compensatory mitigation options and ultimately the Chuitna preservation area was extensive — and greater than a 10-digit HUC watershed approach.

The permit applicant goes on to list other types of off-site mitigation evaluated and reasons for not choosing specific options. Finally, the mitigation plan reads: "After conducting this extensive review, to supplement the reclamation and restoration of placer mined areas in Upper Crooked Creek, Donlin Gold proposes to preserve lands within the Chuitna watershed as compensatory mitigation for the Project. The PRM Plan for the Chuitna Preservation Area is provided in Attachment E."

When reviewing this section, the reader is left uncertain as to the watershed scale size selected by Donlin Gold when it picked the Chuitna Preservation Area. As this section reads now it could be inferred that this area was chosen from a watershed size boundary that spanned two 8-digit HUCs. It seems — because of the lack of background information on the watershed approach taken—that this mitigation opportunity was chosen because it is an existing opportunity with willing landowners in the greater vicinity of impacts, not because Donlin Gold conducted a watershed approach analysis and determined based on best available information that the aquatic resource functions in this area as the best to preserve based on the watershed needs identified.

The 2008 Mitigation Rule provides information that should be considered when conducting the watershed approach. Multiple Army Corps districts have developed specific guidance to ensure third party mitigation providers and PRM are successful in implementing a watershed approach when identifying compensatory mitigation options. The applicant should look to these resources to come into compliance with the 2008 Mitigation Rule's - watershed approach.

Below is information taken from the Environmental Protection Agency's informational PDF on the "watershed approach" as carried out under the 2008 Mitigation Rule. This is one resource of many that points to the types of information that need to be documented in order to inform a watershed approach analysis. For final approval, Donlin Gold's PRM CMP could include an in-depth watershed approach analysis that discusses the following information:

> A watershed approach to mitigation considers the importance of landscape position and resource type of mitigation projects for the sustainability of aquatic resource functions within the watershed. It considers how the types and locations of compensatory mitigation projects will provide the desired aquatic resource functions, and function over time in a changing landscape. Considerations include: • Habitat requirements of important species • Habitat loss or conversion trends • Sources of watershed impairment • Current development trends • Requirements of other regulatory and non-regulatory programs that affect the watershed, such as storm water management or habitat conservation programs.

A watershed approach to mitigation should include, to the extent practicable: • Inventories of historic and existing aquatic resources, including identification of degraded aquatic resources. • Identification of immediate and long-term aquatic resource needs within watersheds that can be met through permittee responsible mitigation, mitigation banks, or in-lieu fee programs. • Identification and prioritization of aquatic resource restoration, establishment, and enhancement activities, and preservation of existing aquatic resources that are important for maintaining or improving ecological functions of the watershed. • Identification and prioritization of resource needs should be as specific as possible, to facilitate determination of mitigation requirements.

Without an appropriate watershed plan, the DE will use a watershed approach based on analysis of information regarding watershed conditions and needs, including potential sites for aquatic resource restoration activities and priorities for aquatic resource conservation. Such information includes: • Current trends in habitat loss or conversion • Cumulative impacts of past development activities • Current development trends • The presence and needs of sensitive species • Site conditions that favor or hinder the success of mitigation projects • Chronic environmental problems such as flooding or poor water quality. Information sources can include: wetland maps; soil surveys; U.S. Geological Survey topographic and hydrologic maps; aerial photographs; information on rare, endangered and threatened species and critical habitat; local ecological reports or studies; and other sources that could be used to identify locations for suitable compensatory mitigation projects in the watershed. The level of information and analysis needed must be commensurate with the scope and scale of the proposed impacts requiring a DA permit, as well as the functions lost as a result of those impacts. https://www.epa.gov/sites/production/files/2015-07/documents/watershed_approach_handout.pdf).

The final mitigation plan for Donlin Gold's PRM compensatory mitigation should include more information on the watershed size boundary and watershed approach analysis. The permittee must clarify the level at which it is conducting the watershed approach analysis before the public and the USACE can determine if the watershed approach as stated in the 2008 Mitigation Rule is being followed in this permit decision.

Mitigation hierarchy (33 CFR Part 332.3(b)/40 CFR Part 230.93(b))

The 2008 Mitigation Rule requires the DA to follow a hierarchy for choosing compensatory mitigation options to offset permitted impacts. The hierarchy is based upon the likelihood of compensatory mitigation plans being both successful and sustainable:

- Mitigation Bank Credits
- In Lieu Fee (ILF) program credits
- PRM under a watershed approach
- PRM though on-site and in-kind mitigation
- PRM through off-site and/or out of kind mitigation

In Donlin Gold's PRM CMP, the permittee states it is choosing to carry out PRM under a watershed approach because of the lack of available mitigation bank and ILF program credits. While it is true that there are no third party mitigation providers with available credits near the impact site, the watershed boundary from which the permittee is conducting the "watershed approach" to identify compensatory mitigation projects has not been clearly described in the final CMP (See Watershed Approach section above).

In reading the CMP, it is impossible to determine if the compensatory mitigation is in fact PRM under a watershed approach and or PRM through on-site and in-kind mitigation and/or off-site and or out-of-kind. Because of this, it is difficult to determine if there are in fact bank or ILF credits available. Until Donlin Gold and the DE determine the watershed size boundary for the watershed approach analysis to be conducted, it is inconclusive as to whether or not the ILF credits available in the Matanuska Susitna area will be inside or outside of this boundary and therefore an option for the permittee. Though these credits would not satisfy the total compensatory mitigation needs for this permit, they could satisfy a part of the total amount. In cases like Donlin Gold, even if there were mitigation banks and ILF programs operating in the vicinity of the impacts, it would be difficult to imagine these sponsors having enough credits to meet the compensatory mitigation needs of an applicant with permitted impacts to thousands of acres of wetland and miles of streams. In these situations, the PRM applicant should fulfill its mitigation requirements using the suite of third party mitigation options available in the watershed boundary established before being allowed to opt for PRM.

In many areas in Alaska, often the only demands for ILF and mitigation bank credits are large industrial scale projects with extensive impacts. By requiring permittees to purchase third party mitigation credits first, and only then allowing them to obtain the remaining mitigation requirements as PRM, the Alaska District will be able to uphold the intent of the 2008 Mitigation Rule mitigation hierarchy and ensure enough business to mitigation banks and ILF programs in order to keep their mitigation programs operating.

A model for Donlin Gold and other permittees with sizable impacts and proposing to do PRM is the Alaska Department of Transportation, Southeast Alaska program, Angoon Airport Project, 2018. To fulfill its compensatory mitigation needs for impacts vastly smaller than Donlin Gold but still substantial (estimated 300 wetland acres), the Alaska District and IRT have encouraged the applicant to purchase any credits available from banks and ILF programs before offsetting the remaining mitigation liability using PRM.

In conclusion, the permittee must clarify the level at which it is conducting the watershed approach analysis before the public and the USACE can determine if the compensatory mitigation hierarchy as stated in the 2008 Mitigation Rule is being followed in this permit decision.

Fundamental elements of a mitigation plan (33 CFR 332.4(c)/40 CFR 230.94(c))

The 2008 Mitigation Rule establishes 12 fundamental elements that all mitigation plans must address and provides guidance on how to address them. There is no specific guidance for PRM in Alaska. However, around the country there are several Army Corps districts that have developed formative documents that support permittees in completing PRM mitigation plans. Based on the level of content in the mitigation plans for each compensatory mitigation project identified as well as the size and scope of both the permitted impacts and mitigation sites, requesting additional information from the permittee for each of the 12 elements of the mitigation plans for the UCC PRM project and the Chuitna PRM project is warranted.

> A mitigation plan is required for all forms of compensatory mitigation. A compensatory mitigation plan that consists of purchasing the appropriate number and type of mitigation credits from an approved mitigation bank or in-lieu fee program is presumed to be environmentally preferable, and requires less effort than developing and implementing a PRM plan. When a permittee secures mitigation credits from an approved mitigation bank or in-lieu fee program, the responsibility for conducting the

necessary compensatory mitigation activities is transferred from the permittee to the mitigation bank or in-lieu fee program sponsor. file://localhost/(http/::www.sac.usace.army.mil:Portals:43:docs:regulatory:Guidelines_for_Preparing_a_Compensatory_Mitigation_Planf.pdf).

In order to be authorized as a mitigation bank or ILF, the program sponsor has to invest hundreds of thousands of dollars, demonstrate competence in the different types of compensatory mitigation, and facilitate a multi-year approval process with the Army Corps of Engineers and an interagency review team (IRT). The effort results in a program Instrument signed by the Army Corps. The program Instrument is the legal document that states how the compensatory mitigation sites will be identified, managed, maintained and mechanisms put in place to ensure compensatory mitigation projects are successful and monitored over the long term. PRM does not include a legal Instrument describing how this liability is managed and enforced. Therefore, the only document guiding the implementation, monitoring, enforcement and long-term management and protection of PRM compensatory mitigation project sites is the mitigation plan and accompanying documents. The process to seek approval of a PRM mitigation plans is generally time consuming and requires considerable effort by the permittee to develop a conceptual plan and final plan that puts in place mechanisms to ensure successful implementation, management and enforcement of PRM compensatory mitigation sites. The DE will request information commensurate with the size and scope of the impacts. The regulation mandates that the USACE require the same level of information from PRM mitigation plans as it does from third-party mitigation providers (2008 Mitigation Rule).

Within Donlin Gold's final CMP, Donlin Gold is proposing two PRMs under a watershed approach projects, in two different geographic regions. The permittee has developed a mitigation plan (33 CFR 332.4(c)/40 CFR 230.94(c)) for each project (Attachment, D and E of Appendix M).

Based on the information provided in the CMP, it remains unclear to the reader what watershed size boundary Donlin Gold chose to conduct the watershed analysis that identified these two sites. Therefor the reviewer remains uncertain if the two compensatory mitigation projects identified will meet the needs of the watershed chosen. As stated above, collecting the information for each of the elements of a final mitigation takes a considerable effort, especially for the size and scope of the compensatory mitigation projects Donlin Gold is purposing to carry out under PRM. Before moving forward with developing final mitigation plans for the UCC project and the Chuitna project the permittee should strengthen its watershed approach analysis in order to demonstrate to the DE and to the regulated public that these are the best projects to offset unavoidable losses to permitted impacts, that the aquatic resource functions restored and protected at these sites do in fact meet the aquatic resources needs of the watershed being assessed, and that there are no other bank or ILF credits available.

Once the watershed approach has been effectively carried out, the appropriate compensatory mitigation sites will be identified to offset the permitted impacts. At this point Donlin Gold will be required to develop information for the 12 elements of a mitigation plan as required by the 2008 Mitigation Rule.

Listed below are the 12 elements of a final mitigation plan. Under each element specific concepts outlined in the 2008 regulations are documented in *italic print*. Under the *italic print*, considerations specific to the Upper Crooked Creek (UCC) project and Chuitna Preserve Area (Chuitna) project have been described. These considerations are based on guidance from the 2008 Mitigation Rule and standards that ILF programs and mitigation bankers are meeting in order to

sell wetland and stream restoration and preservation credits in Alaska. If an element does not have anything specified or if there are only a few points to consider, the lack of comment is not implying that no other information should be required. In fact, this is quite contrary. Based on this preliminary review, if these two projects are found to meet the watershed approach analysis required by the 2008 Mitigation Rule, then, as stated above, additional information for all 12 elements of the final mitigation plan should be required.

The two PRM compensatory mitigation projects as outlined in Donlin Gold's CMP are being proposed to compensate for 2053 permitted wetland impacts and 29.7 miles of permitted stream impacts:

Upper Crooked Creek Watershed Project (UCC project).
Restore and preserve approximately 101.7-acres of wetlands and riparian areas with 8,501-Linear feet (1.61-miles) of stream, and establish another 71.0-acres of riparian preservation buffers, in historical placer mining areas in the Upper Crooked Creek watershed (Donlin Gold. 2018) (Donlin Gold. 2018).

Chuitna Watershed Project (Chuitna project)
Preserve a total of 5,888-acres, of which it is estimated 2,558-acres are wetlands and ponds, with an additional 3,330-acres of upland riparian areas, stream area, and buffers, and 228,325-linear feet (43.24-miles) of streams in the Chuitna watershed (Donlin Gold. 2018).

Overview
On page 4 of Appendix M, under section Memorandum, Donlin Gold list six steps it plans to take to add to the final CMP. Once the information and data for all six of the actions listed on page 4 of the plan are generated and added to the document and additional information is developed for each of the 12 elements of the mitigation plans for the two proposed compensatory mitigation projects, the CMP will be more in compliance with the standards of the 2008 Mitigation Rule.

In the UCC project, the permittee is purposing to restore approximately 101.7 acres of wetlands and riparian areas and 1.61 miles of stream. In Appendix M, Attachment D, the permittee has listed mitigation work categories. These mitigation work categories list the type of restoration projects that will be carried out to offset permitted impacts. The PRM should be required to list each restoration project that is being grouped under the UCC project mitigation work categories and provide specific information for several of the 12 elements of a mitigation plan for each project identified. The DE and regulated public should ensure each restoration activity has: adequate baseline information, a determination of the credits generated at the specific restoration site and how they contribute to the overall number of credits generated throughout the entire UCC project area, a project work plan, a project maintenance plan, performance standards, monitoring plan, long term management plan, adaptive management plan and financial assurances in order to ensure the long term success of each of the different restoration projects being carried throughout the UCC project area.

For the Chuitna project, the permittee does not provide enough information for the following elements of the mitigation plan: the mitigation work plan, performance standards, monitoring requirements for performance standards, a long term management plan, adaptive management plan and financial assurances. The applicant claims that because the Chuitna project is preservation only compensatory mitigation it does not need to provide any or additional detail for these elements. This is not the same standard that the Alaska District is holding preservation-only ILF program and mitigation banker sites too when developing mitigation plans and does not meet

the standards of the 2008 Mitigation Rule. The DE should require more information for each of the elements before approving the final mitigation plan.

12 Elements

1. Objectives: *A description of the resource type(s) and amount(s) that will be provided, the method of compensation (restoration, establishment, enhancement and/or preservation etc.), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.*

Mitigation plans should specify the types and amounts of aquatic resources with as much precision as possible. In both mitigation plans Donlin Gold has provided estimates for the types and amounts. Functional assessments should be used in order to explain which aquatic resource functions at the compensatory mitigation sites will address the needs of the watershed identified. The mitigation plans should discuss the information and data collected from these various wetland and stream functional assessments and how it was used to document function lost at the impact site and functions gained at the mitigation site. If functional assessments are not conducted on aquatic resources being used, the permittee should give a detailed explanation as to why functions were not assessed and specify what approach was used to determine how the compensatory mitigation project meets the needs identified in the watershed approach.

2. Site selection:
A description of the factors considered during the site selection process. This should include consideration of watershed needs, onsite alternatives where applicable, and practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the mitigation project site.

In this element for the Chuitna project, the permittee should be required to discuss the five criteria (33 CFR 332.3) required of preservation only compensatory mitigation sites. The applicant states, "The Chuitna project contains wetland aquatic resources that are unique to the area and provide valuable ecosystem functions at the watershed level." However, very little information is provided in this element or other elements to substantiate either of these statements.

3. Site protection instrument:
A description of the legal arrangements and instrument including site ownership that will be used to ensure the long-term protection of the mitigation project site.

As written, this element in both the UCC mitigation plan and the Chuitna mitigation plan need additional information in order to assure the regulated public that the aquatic resources will be protected, monitored, managed and financed accordingly over the long-term. In addition, a discussion should be added to both mitigation plans as to what the time frame is for the site protection instruments and why the time frame, if not in perpetuity, was chosen.

In its final form, this element in the UCC mitigation plan should specify what type of protection instrument will be used and a template with specific terms and conditions should be included. The permittee should identify cost categories associated with managing the protection easement and property as well as an explanation of how these funds will be transferred from the permittee to the land manager. If a conservation easement is not going to be required, identifying a third party to enforce the terms of the protection instrument should be considered.

As written, this element of the Chuitna mitigation plan needs extensive consideration considering the permittee is proposing two deed restrictions and is providing the language intended to be included. Considering the size and scope of the impacts as well as the fact that the two land owners identified to hold the deed restrictions manage their resource assets for profit a discussion as to why a conservation easement held by a third party is not being considered. The permittee should identify costs categories associated with managing the deed restriction and property as well as an explanation of how these funds will be transferred from the permittee to the land manager. If a conservation easement is not going to be required, identifying a third party to enforce the terms of the protection instrument should be considered.

Both properties identified for compensatory mitigation have subsurface right considerations. The topic of subsurface rights is a serious consideration for all compensatory mitigation providers in Alaska. In certain circumstances mitigation bankers and ILF programs have to forego identified projects because subsurface rights have not been secured and/or cannot be secured. A discussion as to whether or not it is possible to get access to the subsurface minerals below the surface of the property boundary being protected for compensatory mitigation by means outside of the site boundary should be documented.

4. Baseline information:
A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site, not the mitigation bank or in-lieu fee project site.

5. Determination of credits:
A description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See § 332.3(f).)

> *(i) For permittee-responsible mitigation, this should include an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.*
>
> *(ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.*

For both the UCC mitigation plan and the Chuitna mitigation plan, the method used to determine the number of credits being provided by each compensatory mitigation site is confusing. Based on the mitigation plans for the proposed sites, the compensatory mitigation will provide wetland restoration credits, stream restoration credits and wetland and stream preservation credits. It seems these credits are based on acre and linear foot value. In that, one acre of wetlands restored equals 1 wetland credit and 1 linear feet of stream restored equals 1 stream credit. The Chuitna Project is not proposing any restoration credits only preservation credits. It seems, additional credits are not given for mitigating aquatic resources with significant functions nor are credits deducted for mitigating aquatic resource with little function. In fact there is no discussion of

function and/or condition as it relates to determining credits. If these assumptions are true, this section of the mitigation plan needs to explicitly state this information.

The sum of the wetland acres and stream linear stream feet impacted does not equal the sum of the wetland acres and stream acres restored and protected under compensatory mitigation. In this scenario, the applicant seems to be purposing a mitigation ratio- where the amounts of permitted impacts is less than the amount of compensatory mitigation being proposed. The PRM should explicitly state how the amount of compensation has been chosen and why the specified amount adequately offsets the impacts. Also, it seems that compensatory mitigation for riparian areas and buffers receive the same amount of credit as wetlands and streams. If this is the case, the permittee should be required to explain why the non-aquatic resources areas generate the same number of credits as the aquatic resources areas.

In the case of both restoration and preservation compensatory mitigation: if the permittee is not going to use a functional or conditional assessment to determine credits, then, at the very least, the permittee should perform the same functional or conditional assessments on the aquatic resources within the impact and mitigation site project boundaries and discuss findings under this element. The final mitigation plans should state the aquatic resource type that is being mitigated and the specific functions and/or conditions that the resource is providing for the watershed should be identified.

In determining how many credits a compensatory mitigation site produces the 2008 Mitigation Rules addresses the following components: time lag, risk, and the five criteria that need to be met for preservation-only compensatory mitigation. In 2016, the Alaska District developed the Alaska District: Credit Debit Methodology, Version 1 (http://www.poa.usace.army.mil/Portals/34/docs/regulatory/specialpns/2016/_Alaska%20District%20Credit%20Debit%20Methodology%20Version%201.pdf?ver=2016-09-21-132006-233).

This document provides detailed information as to what time lag, risk and the preservation criteria are and how third party mitigation providers and PRM can address these components. In the final mitigation plan for the UCC and Chuitna projects Donlin Gold should address time lag, risk and the preservation criteria when determining the number of credits.

6. Mitigation work plan: *Detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.*

The level of information in the mitigation work plan for the UCC project fails to inform the DE and/or the regulated public about the specific restoration activities that will be carried out. Considering Donlin Gold is in the mining business and not the aquatic resource restoration business, the PRM should be required to provide substantial information, including potential third-party entities that will be contracted to ensure restoration activities are performed and monitored adequately.

7. Maintenance plan: *A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.*

For the UCC project, a maintenance plan for each restoration activity should be developed for the final mitigation plan

For the Chuitna project, a maintenance plan should be developed for the final mitigation plan.

8. Performance standards: *Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives.*

For the UCC project, the permittee should look to USACE guidance on the development of performance standards. Performance standards are instrumental in determining the successful trajectory of restoration projects and to inform the DE if mitigation activities are resulting in functional and conditional lift. Each restoration site should have detailed performance standards, as well as a schedule as to when the standards will be met.

The permittee does not provide any performance standards for the Chuitna project. There are performance standards for preservation-only compensatory mitigation sites. The permittee should develop performance standards in the final mitigation plan for the Chuitna project.

9. Monitoring requirements: *A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the district engineer must be included.*

It is unclear who will be responsible for monitoring the projects carried out under the UCC project Based on the information provided in the long term management plan, site protection instrument, and the information listed under this element. A list of the information required in the monitoring reports should be included, as well as a schedule. Also, it reads under this element for the UCC project that monitoring reports for this area will be produced annually until the area meet performance standards. The mitigation plan does not provide a schedule for performance standards, therefore it is impossible to know when the monitoring period for the projects will end. The time frame required for monitoring should be described.

Additional monitoring requirements for the Chuitna project should be considered.

10. **Long-term management plan:** *A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management.*

Example template of the long-term management plan should be submitted with the final mitigation plans for the UCC and Chuitna projects. The plan should include who the responsible party is for stewarding the site over the long term. Financial assurances should be listed. A description of how the financial assurances to carry out long-term management are to be distributed and to whom they will be paid should be included.

11. Adaptive management plan: *A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See § 332.7(c).)*

12. Financial assurances. *A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see § 332.3(n)).*

In accordance with the 2008 Mitigation Rule, the Alaska District is requiring specific information in regards to financial assurance from third-party providers, including type, amount and how they will be used by and distributed to third parties when needed. There is an abundance of information and resources available to mitigation providers on financial assurance for compensatory mitigation projects. The USACE, Nashville and Memphis Districts developed a draft permittee-responsible mitigation guidance document in May 2016. These districts provide the following information to support PRM develop descriptions of financial assurances in the PRM mitigation plans:

> Financial assurance. For construction phase, maintenance, monitoring, remedial measures, and project success, identify: party responsible to establish and manage the financial assurance, the specific type of financial instrument (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, etc.), the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions. In order to ensure the financial assurances are adequate, an itemized spreadsheet listing costs associated with construction, planting, and maintenance of the mitigation site through the monitoring period (including potential adaptive management measures) should be prepared and included with the mitigation plan.
>
> Identify the schedule by which financial assurances will be reviewed and adjusted to reflect current economic factors.
> file://localhost/(http/:www.lrn.usace.army.mil:Portals:49:docs:Regulatory:Permittee-Responsible Mitigation Guidance.pdf%3Fver=2017-06-05-175549-910)

The Alaska District does not explicitly require the above information. However, it provides an example of the types of information Donlin Gold could include in both the UCC project and Chuitna project mitigation plans.

Considering the permittee is proposing to carry out over 100 acres of wetland restoration under the UCC project, the PRM final mitigation plan for a compensatory mitigation in the form of restoration and the financial assurance should document considerably more information to ensure the DA and the regulated public that there are financial resources set aside to ensure the success of these compensatory mitigation activities.

Conclusion

Based on my professional experience working with the Alaska District's Compensatory Mitigation Program over the past seven years and for the reasons stated within this report it would be concerning if the DE granted Donlin Gold a Section 404 permit and approved the final CMP with the mitigation plans, as written, for the UCC compensatory mitigation project (Attachment D, of Appendix M) and the Chuitna compensatory mitigation project (Attachment E of Appendix M).

The DE should require Donlin Gold to generate additional information in order to ensure: the watershed approach was implemented, the mitigation hierarchy was followed based on the watershed approach analysis, and the fundamental elements of a mitigation plan are complete for each PRM compensatory mitigation site identified. Once Donlin Gold has developed a final mitigation plan for each compensatory mitigation site a new Section 404 permit should be

submitted with the updated CMP and final mitigation plans. The CMP and final mitigation plans should be public noticed with a public comment period in accordance with the 2008 Mitigation Rule. The public notice will provide the regulated public and in particular aquatic resource restoration practitioners and land protection agencies (in particular) a chance to review the final mitigation plans to ensure the level of information described for all 12 elements of the plan meet the 2008 Mitigation Rule and are commensurate with the size and scope of the impacts.

REFERENCES

Donlin Gold LLC. April 2018. Donlin Project, Final Environmental Impact Statement.

EPA. May 2018. Watershed approach to compensatory mitigation. https://www.epa.gov/sites/production/files/2015-07/documents/watershed_approach_handout.pdf
EPA, USACE, USFWS, NOAA. 1994. Alaska Wetlands Initiative, Summary Report

Institute For Water Resources. October 2015. The Mitigation Rule: A Review of the 2008 Regulations Governing Mitigation for Losses of Aquatic Habitat. http://www.iwr.usace.army.mil/Portals/70/docs/iwrreports/2015-R-03.pdf

USACE Alaska District. 2016. Alaska District: Credit Debit Methodology-Version 1.0. http://www.poa.usace.army.mil/Portals/34/docs/regulatory/specialpns/2016/_Alaska%20District%20Credit%20Debit%20Methodology%20Version%201.pdf?ver=2016-09-21-132006-233

USACE Charleston District. October 2010. Guidelines for Preparing a Compensatory Mitigation Plan. Compensatory Mitigation Guidelines Working Draft. http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines_for_Preparing_a_Compensatory_Mitigation_Planf.pdf

USACE Kansas City District. January 2010 Compensatory Mitigation Plan Requirements for Permittee Responsible Mitigation Projects. http://www.jacksongov.org/DocumentCenter/View/308/Mitigation-Plan-Requirements-PDF

USACE Nashville and Memphis Districts, Permittee-Responsible Mitigation Guidance. Draft May 26, 2016. http://www.lrn.usace.army.mil/Portals/49/docs/Regulatory/Permittee-Responsible%20Mitigation%20Guidance.pdf?ver=2017-06-05-175549-910

USACE and EPA. April 10, 2008. 33 CFR Parts 325 and 332; 40 CFR Part 230. Compensatory Mitigation for Losses of Aquatic Resources, Mitigation Rule.