

EPA Comments – Pebble Project Preliminary Draft EIS, Section 4.22 - Wetlands and Other Waters/Special Aquatic Sites

Agency	Comment No.	Section, Paragraph, and Page #	Cooperating Agency Comment (and Purpose of Comment)	Proposed Resolution (Additions or Deletion of Text)	Response
EPA	1	General 4.22	<p>We recommend that the DEIS include a description of the methodology for how the extent and type of the direct and indirect impacts to wetlands, streams, lakes, ponds and marine waters was estimated (e.g., how figure 4.22.02 was generated).</p> <p>We also recommend including an analysis of impacts resulting from the project on a more localized level, rather than as a percentage of impacts within a large-scale watershed.</p> <p>In addition, we recommend adding an analysis describing how the baseline conditions for each of the functions performed by the aquatic resources impacted by the project are expected to change with each project alternative. This is a critical component of analysis for this section of the DEIS in order to adequately characterize the likely impacts of each alternative.</p>	See Response.	<p>The analysis uses the USGS 10-digit hydrologic unit code (HUC) as a standard watershed scale. Dividing the analysis area into sub-watersheds (12-digit hydrologic units) would greatly multiply the amount of data to convey, without providing a benefit to the reader. The sub-watersheds we reviewed for the mine site, and it was determined that with respect to impacts to wetlands/waters, there was not a great difference between sub-watersheds.</p> <p>Chapter 3, Affected Environment, provides a baseline description of the environment (Section 3.22). Chapter 4, Environmental Consequences, provides an analysis of impacts to wetlands (Section 4.22) from the three action alternatives to the environment described in Chapter 3.</p> <p>A functional assessment will not be prepared for this proposed project or this EIS. See response to Comment #8 in the EPA Section 3.22 comment response matrix.</p> <p>Impacts are characterized by four factors; the framework for impact analysis in the EIS is provided in Section 4.1, Introduction to Environmental Consequences. For wetlands, direct impacts are considered loss of acres of wetlands and other waters. Indirect impacts vary depending on the type of impact and location within the indirect impact zone, and include impacts from dewatering, fugitive dust, or other types of impacts described in Section 4.22. Impact analysis is in accordance with CEQ NEPA guidance.</p>

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EPA	2	General 4.22	<p>It is difficult to follow the various mapping capabilities, datasets, scale, and degree of field verification that are used to come to the conclusions in this section, especially without seeing the maps during this review period.</p> <p>The approach seems to be that the areas that have better mapping (such as the mine site footprint) are used to represent the approximation of the entire HUC 10 watershed and are compared to the disturbance threshold. For example, on page 4.22-7, the document identifies riverine wetlands as high-value; however, it states that the extent of such high-value wetlands is not known in the 171,000-acre watershed. As these wetlands comprise approx. 3% of the mine site, the same ratio in the entire watershed is X number of wetlands and the resulting percent of impacts is a similar percent as on the mine site. It is unclear whether the footprint of the mine site is actually representative of the entire HUC 10 watershed. Applying this logic to determine the described threshold approach appears problematic without additional information in the DEIS to verify the assertions presented.</p>	See Response.	<p>Revisions were made that added areas/percentages of field verified data for each alternative in Section 3.22.2, and for Alternative 2 and Alternative 3 component impact areas.</p> <p>For the mine site, NWI mapping was available for the entire watershed and this is now used for determining the proportionate extent of impacts. NHD stream data was used to calculate stream lengths. However, as the NWI data does not include HGM, we assumed a 3% estimate for the extent of riverine wetlands in the watershed. The 3% estimate for riverine wetlands within the watershed is considered on the low end, as the mine site is located in the upper watershed, and we would expect riverine wetlands to be more prevalent lower in the watershed based on aerial imagery and topography.</p>

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EPA	3	4.22-1 4.22	We recommend adding habitat degradation downstream of the mine site to the list of indirect impacts.	See Response.	Revisions made to text in this section.
EPA	4	4.22-1 4.22	We recommend that the DEIS clarify that the impacts described in Section 4.22 are evaluated differently in Appendix F (404(b)(1) Analysis) and explain why this is the case. In addition, we understand that the Corps will share the draft 404(b)(1) analysis with EPA for review before it is included in the Final EIS. We appreciate the opportunity to provide early input.	See Response.	The different processes of NEPA and CWA 404(b)(1) analysis are mentioned briefly in Section 4.22. These are separate processes. The USACE will provide the 404(b)(1) analysis when it is prepared, which may or may not be included in the Final EIS. The EIS would reflect information as appropriate.
EPA	5	4.22-1 4.22	We recommend that, instead of the threshold approach, the EIS describe the amount of different types of wetlands impacted across the alternatives without comparison to an arbitrary threshold. Please see the white paper that EPA sent to the AK District in July 2018 that outlines scientific concerns regarding this kind of threshold approach. If the Corps continues with use of these thresholds, we recommend that the DEIS identify the scientific basis for the thresholds proposed in this paragraph and clarify how these thresholds are being used in the impacts analysis. We also	See Response.	Revisions made to Section 4.22.2 to clarify the impact analysis framework. See also the response to Comment #1 above. The EPA white paper was reviewed and we appreciate the concerns with how a threshold approach has been used in other EISs in Alaska. We feel that the amount of wetland impacts, while important, should not be the only criteria when assessing magnitude. The use of thresholds, and the concept of regionally important wetlands, meets the impact assessment framework for magnitude assessment for this EIS, per CEQ NEPA guidance. The phrase “within a particular watershed” is clarified in 4.22.2, second paragraph.

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			<p>recommend that the DEIS clarify how the approach proposed in this paragraph is similar to the approaches used in the Point Thompson and Donlin Mine EISs. We recommend that this clarification include the history of the approach, the exact approach used in the referenced documents, supporting scientific literature, how the geographic location of each project lends the ability for similar analysis, and adequacy of information available to make these comparisons.</p> <p>We also recommend that the DEIS clarify what is meant by “within a particular watershed.” We note that later sections refer to a 10-digit HUC. We recommend that the DEIS explain throughout what scale is used and why.</p>		
EPA	6	4.22-1 4.22	<p>We recommend that the DEIS clarify if and where the temporary impacts are mapped. If the temporary impacts were not mapped, then please explain how the numeric estimates of temporary impacts in section 4.22.2 were determined.</p> <p>We also recommend identifying any evidence that exists that supports whether restoring these</p>	See Response.	<p>Duration of impacts has been clarified in relevant sections.</p> <p>Assessment of effectiveness of proposed reclamation would be considered during a later permitting phase.</p> <p>Direct impacts at the mine site are considered permanent. Temporary impacts were mapped and are limited to the in-water portions of the natural gas pipeline; dredging for Diamond Point port; and the construction access zone for the transportation corridors</p>

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			sites to “pre-construction contours” would ensure that functions would be restored to pre-construction levels.		and ports (which overlap with the indirect dust zones).
EPA	7	4.22-1 4.22	<p>We recommend that the detailed reclamation and closure plan referred to in the text be <u>provided in advance</u> of the DEIS. Our previously submitted comments on PDEIS Chapter 2 recommended providing additional details related to reclamation and closure that would typically be provided in a reclamation and closure plan. The information on reclamation and closure is necessary to support the analysis of impacts and consideration of mitigation measures in the EIS, pursuant to NEPA.</p> <p>We note that temporary impacts are discussed throughout Section 4.22. It is not currently clear for agency decision makers and the public to understand how it was determined which impacts would be temporary without a detailed reclamation and closure plan.</p>	See Response.	<p>A detailed reclamation plan (sometimes called a reclamation and closure plan) would be developed by the applicant at a later time. A reclamation plan was not available at the time of publication of the Draft EIS.</p> <p>The in-water work for the natural gas pipeline, and dredging for Diamond Point port, are considered temporary impacts as natural sediment movement would return these areas over time to prior function. The overland sections of the natural gas pipeline are considered permanent impacts at this time since a reclamation plan has not been provided. It is expected that many of these areas would also be reclaimed following construction. The temporary construction access zones in the transportation corridor are outside of the road and pipeline footprint and would be disturbed only during construction (no fill or excavation).</p>
EPA	8	4.22-2 4.22	We recommend that the DEIS elaborate and offer examples here, as this sentence is confusing. It is unclear how many potential watersheds are used to determine the impact	See Response.	Text has been rephrased in Section 4.22.2. The watersheds assessed in this approach are listed in the direct impact tables in this section.

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			threshold approach.		
EPA	9	4.22-2 4.22	It is not clear how this disclaimer speaks to the validity of the document to present the information to the reader to support the conclusions of the 'disturbance area thresholds' concept for the watersheds. We recommend providing additional information to support the approach used. Also, please describe the level of certainty associated with the approximations and describe why the approximations are adequate for the impact analysis.	See Response.	Data gaps are described in Section 3.1, Introduction to Affected Environment. See the response to Comment #7 in the EPA 3.22 Comment Response Matrix.
EPA	10	4.22-5 4.22.2.1	Section 4.22 estimates that the proposed project would impact 24.1 miles of stream. We recommend that the DEIS clarify the methodology for how this estimate was derived, including explaining which impacts are included in this estimate and which impacts are not included.		Stream length impacts have been revised. Section 4.22.5 is intended to be a summary of impacts for the alternative(s) and follows an outline developed by the USACE. Details of the impacts are provided in the each by project component. The stream length impact for Alternative 1 has been revised to 81 miles total. The previous calculation of 32.5 miles of impacts was based on NHD data for the perennial streams rather than the field-verified mapping for the project. Data were provided as polygons from PLP. Direct impacts to streams were calculated based on the stream area and length within the disturbance footprints for each project component.
EPA	11	4.22-7 4.22	We recommend clarifying why Section 4.22 lumps the North	See Response.	Comment acknowledged. As per the response to Comment #1 above, the

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			Fork Koktuli and South Fork Koktuli into one assessment area while Section 4.24 evaluates impacts separately to the North Fork Koktuli and South Fork Koktuli.		impacts were not broken out by sub-watersheds. The wetlands/waters assessment was based on the HUC 10 watersheds for all project components and alternatives. Environmental baseline data collected for fisheries was broken out by NFK and SFK sub-watersheds, and this was carried through into Section 4.24, Fish Values. This information is assessed as not necessary to disclose the reasonably foreseeable significant impacts of the proposed project. Additionally, the requested information would not be essential to make a reasoned choice among alternatives.
EPA	12	4.22-29 4.22.6.1	We recommend that this section describe the current wetlands losses that have resulted from exploration at the mine site. We recommend including an estimate of the amount, type, and location of current wetlands losses so that the baseline affected environment and impacts prior to mining operations in the area are understood.	See Response.	Section 4.22.6 has been revised. Based on the environmental baseline data for wetlands, no permanent loss of wetlands has been described at the mine site due to exploration activities.
EPA	13	4.22-29 4.22.6.2	Section 4.22.6.2 looks at the cumulative effects of a 78-year mine plan at the Pebble deposit. We have the following recommendations related to this section. <ul style="list-style-type: none"> It appears that rather than considering wetland losses at the 10-digit HUC scale 	See Response.	Section 4.22.6 has been revised. A more detailed analysis of impacts associated with the expansion of the Pebble Mine has been provided.

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			<p>(as was done earlier in this section) wetland losses are now being considered across a combined nine 10-digit HUCs. We recommend that the DEIS clarify why the analysis shifts to a larger watershed scale to evaluate wetland losses in this subsection as compared to earlier portions of 4.22 and recommend using a consistent approach to evaluating wetlands losses if possible.</p> <ul style="list-style-type: none"> • We also recommend that this section evaluate how the cumulative impacts to wetlands, streams, and other aquatic resources would impact the functions performed by these aquatic resources. • Please quantify and characterize the cumulative impacts to streams, lakes, and ponds under the 78-year mine plan. These are currently omitted. • In addition, we recommend additional discussion regarding the potential expansion discussed in this section. This could include an analysis of how the mine site footprint may or may not be designed to anticipate 		

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			the expansion and how the mine site footprint would be redesigned or reduced if the current design was limited to a single and complete project.		
EPA	14	4.22-30 4.22.6.3	We recommend clarifying what is meant by “geographically limited.” Specifically, please clarify if this is referring to the project footprint area, a 10-digit HUC, nine 10-digit HUCs, a 6-digit HUC, the Nushagak River, or the Bristol Bay watershed, and disclose what information or analysis this conclusion is based upon.	See Response.	Section 4.22.6 has been revised.
EPA	15	Figures	When you compare Figure 4.22-2 to 4.24-1, it appears that impacts to streams in figure 4.24-1 are underrepresented. We recommend that the DEIS clarify whether there is a discrepancy between streams in the two maps and if so explain why.	See Response.	This figure has been revised. The two figures now appear to show the same streams. We are not aware of any discrepancies between the two maps.