

**Nondalton Tribal Council Comments – Pebble Project Preliminary Draft EIS, Section 3.16 - Surface Water Hydrology**

Agency	Comment Number	Section, Paragraph, and Page #	Relevant Text/Subject	Comment	Response
Nondalton Tribal Council	1	Section 3.16, Section 3.17	General	Neither <b>Section 3.16 Surface Water Hydrology</b> nor <b>Section 3.17</b> Hydrology appear to identify potential impacts to surface water from the proposed project or regulations applicable to surface water quality.	Environmental consequences (impacts) are described in Chapter 4 of the DEIS. Chapter 3 describes only the affected environment. Regulations and criteria specific to surface water quality are provided in Appendix K3.18, and are incorporated into the discussion of impacts in Section 4.18, Water and Sediment Quality, as necessary.
Nondalton Tribal Council	2	Section 3.16.1.2	Transportation Corridor	Essentially no hydrologic data are provided for these areas; therefore, it is unclear how key project features, such as large bridges and culverts, would be designed or what the potential hazards and impacts would be. There is no discussion regarding how these data gaps will be filled. Without this information, it is unclear how the impacts of the project elements and alternatives can adequately be assessed and evaluated. As with many other areas of this environmental impact statement (EIS), the potential impacts to the environment from the transportation corridor will require more detailed studies, like those available for the mine site, before proceeding with the EIS.	Limited surface water hydrology data for the transportation corridors is not a data gap (see Section 3.1, Introduction to Affected Environment). Where sufficient streamflow data are not available, it is standard practice in Alaska to design the drainage structures using regional regression equations to predict the design. Regional regression equations that might be used for this project are the USGS regression equations published in 2016 (Curran et al. 2016).
Nondalton Tribal Council	3	Section 3.16.1.3	Amakdedori Port	Essentially no hydrologic data are provided for this area; therefore, it is unclear how key project features of the port facility would be designed or what the potential hazards and impacts would be. There is no discussion regarding how these data gaps will be filled. Without this information, it is unclear how the impacts of the project elements and alternatives can adequately be assessed and evaluated. As with many other areas of the PDEIS, the potential impacts to the environment from the Amakdedori Port facilities will require more detailed studies, like those available for the mine site, before proceeding with the EIS.	Limited surface water hydrology data for the not a data gap (see Section 3.1, Introduction to Affected Environment). Where sufficient streamflow data are not available, it is standard practice in Alaska to design the drainage structures using regional regression equations to predict the design. Regional regression equations that might be used for this project are the USGS regression equations published in 2016 (Curran et al. 2016).

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Nondalton Tribal Council	4	Section 3.16.1.3	Flood Hazards	This subsection includes a bold but entirely unsupported statement; “The Port would be developed above the floodplain above Amakdedori Creek; therefore, there are no flood hazards.” This claim is made, despite the complete absence of hydrologic data for Amakdedori Creek. There are no data from streamflow monitoring, seasonal hydrology, or floodplain mapping.	Text has been revised in the DEIS to remove the definitive statement. The original statement was meant to be a general observation that the port would likely be developed above the floodplain and based on observations of geomorphology and other observable characteristics. Subsequent internal technical review of the PDEIS agrees with the commenter’s statement and has resulted in revision of the statement in the DEIS. The port would be developed based on a design flood event for Amakdedori Creek. Where sufficient streamflow data are not available, it is standard practice in Alaska to design drainage structures using regional regression equations to predict the design. An example of regional regression equations that might be used for this project is the USGS regression equations published in 2016 (Curran et al. 2016).
Nondalton Tribal Council	5	Section 3.16.1.3	Marine Water – Western Marine Landfall of Natural Gas Pipeline. Regional Wave Climate	The potential for tsunami-generated waves in this very active earthquake area should be discussed in this subsection and table. While this may also be addressed under geologic hazards, it is appropriate to provide the information here.	All geohazards, including potential tsunamis, are addressed in in the DEIS Sections 3.15 and 4.15, Geohazards. We respectfully disagree about duplicating information regarding tsunamis in the Surface Water Hydrology sections. Information on tsunamis is provided exclusively under the Geohazards discussion to facilitate a complete discussion in one location of the EIS. A partial discussion of tsunamis in another section could be misunderstood as incomplete or inconsistent.

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Nondalton Tribal Council	6	Section 3.16.1.3	Local Wave Climate	A quote from Chester Passic, Commander, U.S. Coast Guard, is provided on Pages 3.16-28 and 3.16-29. This quote from a knowledgeable vessel captain with direct daily experience of the area is an example of the type of local knowledge that should be taken very seriously. Any issues with navigation in the port area could increase the potential for grounding, spills, and other incidents that could have significant adverse effects on this resource-rich and currently undeveloped environment.	Comment noted.
Nondalton Tribal Council	7	Section 3.16.1.3	Iliamna Lake	<p>The third paragraph on Page 3.16-31 includes the following text: “for a fetch length of 35 miles from the proposed ferry crossing to the northeastern end of Iliamna Lake, a significant wave height of 10 <u>feet meters</u> and dominant wave period of 6.5 seconds were calculated” (emphasis added). The underlined text should be reviewed to determine whether the modeled wave height is in feet or meters, since this would make quite a difference to an attempted ferry crossing.</p> <p>The additional wave height that might occur should wind strengths be greater than those modeled should also be calculated. Actual wind strength data should be collected prior to attempting to evaluate the feasibility of a ferry crossing Iliamna Lake, particularly in winter.</p>	<p>Text has been reviewed and revised to “10 feet” and the word “meters” removed (in the DEIS).</p> <p>Wind “strength” data are available for the vicinity of Iliamna Lake that would include ferry operations, as measured at Iliamna Airport (described in the DEIS). These data indicate maximum wind speed of 47 mph has been recorded at the airport. Data from the National Climatic Data Center were also evaluated for Iliamna and Igiugig (west end of the lake), which showed maximum wind speed of 40 mph is common (also described in the DEIS). The model-calculated wave height in the DEIS is based on higher wind velocity used in the model than the recorded data. The DEIS incorporates results of wave forecasting (USACE 2002) using wind speed of 60 mph (substantially greater than the maximum recorded velocity of 47 mph at the airport). This wind speed was chosen as a conservative estimate of maximum conditions on the lake. The anecdotal statement in the DEIS mentions “probably 100 mph,” but this is not an instrument-reported velocity and a perception of the observer.</p>

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Nondalton Tribal Council	8	Section 3.16.4.2	Mine Site Water Use	The first paragraph on Page 3.16-45 is a fairly cryptic paragraph that must be significantly expanded. What are these water rights for? When do they expire? What percentage of the streamflow do they represent? Are there water rights that would be needed in any other areas of the proposed project or for other alternatives?	PLP has applied for surface water rights for some of the main drainages within the mine site area, including the SFK river, the NFK river (designated in baseline studies as tributary NK 1.190), and UTC. All water rights applications filed by PLP are on the ADNR website at:  <a href="http://dnr.alaska.gov/mlw/mining/largemine/pebble/water-right-apps/">http://dnr.alaska.gov/mlw/mining/largemine/pebble/water-right-apps/</a> (ADNR 2018c). Text was added to the DEIS to provide this reference.