How Alternatives Will be Developed for the Pebble Project Environmental Impact Statement (EIS)

1. Identify need to which the United States Army Corps of Engineers-Alaska District (USACE) is responding and identify the overall project purpose. State the applicant's objectives for the project.
2. Compile a range of alternatives to be considered that meet the overall project purpose with consideration of the applicant's objectives. The alternatives compilation will include the no action alternative, any alternatives considered by the applicant, and alternatives suggested during the scoping process.
3. Determine whether identified alternatives are reasonable in accordance with the National Environmental Policy Act.[1]
    a. Reasonable is based on the consideration of the overall project purpose including stated objectives as well as technology, economics and common sense.
    b. Determine whether an alternative meets the overall project purpose inclusive of objectives.
        i. Alternatives that do not meet the overall project purpose will be eliminated at this stage.
        ii. Alternatives that meet the overall purpose will move forward
    c. Alternatives that meet the overall project purpose will be reviewed to determine whether the alternative was available to the applicant during project planning (past 10 years).
        i. Alternatives identified as reasonable but were not available to the applicant will be removed at this time.
        ii. Alternatives that were available will move forward.
    d. Alternatives will be reviewed for technical feasibility (can these alternatives be accomplished using existing technology and equipment?)
        i. Alternatives determined to not be technically feasible will be removed at this stage.
        ii. Alternatives determined to be technically feasible will move forward
    e. Alternatives will be reviewed for economic feasibility
        i. Any alternative claimed to not be economically feasible by the applicant will require an economic analysis to support statement
        ii. An alternative proven to not be economically feasible will be removed at this time
        iii. Alternatives determined to be economically feasible will move forward.
    f. Alternatives will be reviewed using common sense
        i. Alternatives that increase adverse environmental impacts will be removed at this time.
        ii. Alternatives will also be reviewed for logistical feasibility. Alternatives that are not logistically feasible will be removed at this time.

Identified REASONABLE ALTERNATIVES with significantly LESSER impacts will be evaluated in the EIS along with the NO ACTION alternative and the applicant's PROPOSED alternative.

How Alternatives are Screened for Practicability

Due to the USACE specific authorities, alternatives must also be screened for practicability. The practicability determination is described below. Ultimately, the USACE must identify the **least environmentally damaging practicable alternative (LEDPA)** in the Record of Decision prior to making a decision under Section 404 of the Clean Water Act.

1. Of the identified reasonable alternatives further identify practicable alternatives in accordance with Clean Water Act Section 404(b)(1) of the Clean Water Act[2] (the Guidelines). The Guidelines state practicable means the project is available and capable of being done after taking into consideration **cost**, **existing technology** and/or **logistics** in light of the overall project purpose including the applicant's objectives. Logistics and existing technology have at this point been screened in our determination of reasonable alternatives and are included below only for completeness and explanatory purposes. *An alternative needs to fail only one practicability factor to be determined not practicable*
    a. Costs - Cost is analyzed in the context of the overall scope/cost of the project and whether it is unreasonably expensive. This determination is typically made in relation to comparable costs for similar actions in the region or analogous markets. Cost is to be based on an objective, industry-neutral inquiry that does not consider an individual applicant's financial standing. The data used for any cost must be current with respect to the time of the alternatives analysis. Because one alternative costs more than another does not mean that the more expensive alternative is impracticable. It is important to note that in the context of this definition, cost does not include economics.
    b. Existing Technology - The alternatives examined should consider the limitations of existing technology yet incorporate the most efficient/least-impacting construction methods currently available.
    c. Logistics - The alternatives evaluated may incorporate an examination of various logistics associated with the project, i.e., placement of facilities within a specified distance to major thoroughfares, utilization of existing storage or staging areas, and/or safety concerns that cannot be overcome.
    d. Availability: The Guidelines state that if it is otherwise a practicable alternative, an area not presently owned by the applicant that could reasonably be obtained, utilized, expanded, or managed in order to fulfill the overall purpose of the proposed activity can still be considered a practicable alternative. In other words, the fact that an applicant does not own an alternative parcel, does not preclude that parcel from being considered as a practicable alternative. This factor is normally a consideration as a logistics and possibly cost limitation.
    e. Two tests are specified in the Guidelines for alternatives when the basic purpose of a project does not require siting within special aquatic sites such as wetlands. The basic purpose of this project is mining. The type of mining proposed (transitional metal-copper, gold, molybdenum) does not require siting

within special aquatic sites. Therefore:

i. It is presumed that alternatives that do not affect special aquatic sites such as wetlands are available

ii. It is presumed that alternatives in sites that are not special aquatic sites will have a LESSER ADVERSE impact on the aquatic ecosystem

Once an otherwise practicable alternative has been identified, the applicant (Pebble Limited Partnership) will be required to clearly demonstrate to the USACE that both of these presumptions have been rebutted or the alternative will be considered in the determination of the LEDPA.

**All practicable alternatives are also reasonable alternatives.

2. The final step in developing alternatives is to construct detailed descriptions for the reasonable alternatives that have been retained and carried forward for evaluation in the EIS.

How the Public Can Provide Useful Guidance on Alternatives that should be Considered in the EIS

The purpose of scoping is to determine the alternatives that should be considered in the analysis and determine the extent and nature of issues by which each alternative should be evaluated.

Scoping is an important opportunity for all citizens to provide specific suggestions for alternatives that should be considered in preparing the EIS, and issues that should be addressed in that process. The following guidelines may be useful in submitting comments during the scoping period (*examples shown in italics*):

1. Keep in mind the reasonable alternative screening criteria described above – any suggestions should fulfill the overall project purpose in consideration of the applicant's objectives with a focus on reducing potential adverse environmental impacts.
2. You can suggest alternatives specific to components for developing the mine (*mining methods, water treatment, tailings management*), the port site, the transportation corridor and modes (*rail*), and the natural gas pipeline.
3. You can suggest changes in location of project components (*road, port site, mine components*).
4. You can suggest potential mitigation measures and conditions of development that may reduce environmental impacts.
5. Be as specific as possible and provide the reason for making your suggestions (*construction of a rail connection may eliminate truck traffic and reduce dust levels*).

The USACE will make the results of the scoping process publically available by publishing the Scoping Report on our website for the project pebbleprojecteis.com and will also communicate information for newsletters.

How Alternatives will be evaluated in this EIS

Once reasonable alternatives have been identified for evaluation as above, the USACE will evaluate each alternative in relation to the following:

- Conservation
- Economics
- Aesthetics
- General environmental concerns
- Wetlands
- Historic properties (inclusive of sacred sites or areas of community and/or spiritual significance)
- Fish and wildlife values (inclusive of endangered species, marine mammals, fisheries and wildlife)
- Flood hazards
- Floodplain values
- Land use (inclusive of transportation corridors)
- Navigation
- Shore erosion and accretion
- Recreation
- Water supply and conservation
- Water quality
- Energy needs
- Safety
- Food and fiber production (this would include subsistence activities)
- Mineral needs
- Considerations of property ownership
- The needs and welfare of the people

In the EIS, we will develop a framework to analyze each of these issues with emphasis on issues that rise to the highest level of importance.

During scoping, we are also asking you to help us determine which of these factors are of highest concern to you, to provide information of specific concern regarding any factor listed, and to identify any other specific issues that are not listed. As with your comments related to alternatives, please be as specific as possible when identifying other issues or expanding on issues identified above. This will help us develop the analytical framework moving forward.

For alternatives identified as practicable, the USACE will ultimately make the following determinations:

(1) whether the alternative is the least environmentally damaging practicable alternative,

(2) whether the LEDPA will cause or contribute to the violation of applicable state or Federal laws, such as water quality standards or the Endangered Species Act,

(3) whether the LEDPA will result in significant degradation of waters of the United States

(4) whether the LEDPA includes appropriate and practicable steps have been taken to minimize the adverse impacts of the project on wetlands and other waters.