



PEBBLE PROJECT

Permitting Status Update

March 2020

AGENDA



NEPA / Public Process Update

Resolution of DEIS Issues

Parallel Processes

- Consultations
- Mitigation Plan

Questions

NEPA / Public Process Update



AGENCY & PUBLIC INVOLVEMENT



Substantial public comment opportunities to date

- Scoping comment period of 90 days
- DEIS comment period of 120 days

Two rounds of multi-agency technical meetings

- Focused on addressing DEIS comments

Regular cooperating agency meetings

Full comprehensive PFEIS document produced

- 45-day agency review and comment period
- Copies to tribes
- Additional round of technical meetings during this period

Section 106 Consultation meeting held in Dillingham

- Additional round of Government to Government meetings with tribes in the region
- PFEIS lists > 100 separate G2G meetings

GOVERNMENT TO GOVERNMENT



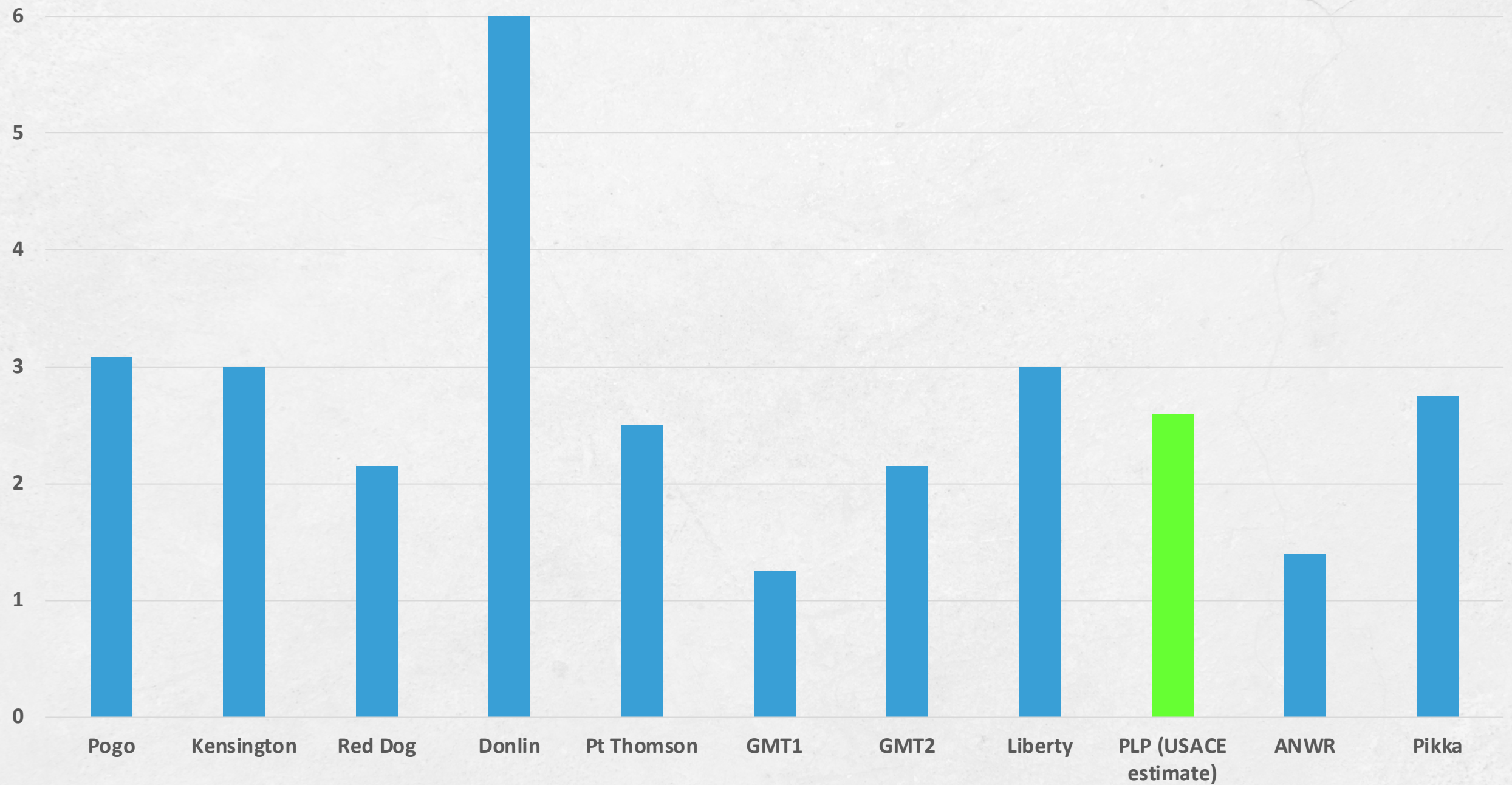
35 Bristol Bay & Cook Inlet Tribal Governments

- Newhalen Tribal Council
- Aleknagik Traditional Council
- Chignik Bay Tribal Council
- Chignik Lagoon Village Council
- Chignik Lake Traditional Council
- Clarks Point Village Council
- Cook Inlet Tribal Council
- Curyung Tribal Council
- Egegik Village Council
- Ekuk Village Council
- Ekwok Village Council
- Igiugig Village Council
- Iliamna Village Council
- Ivanof Bay Tribal Council
- King Salmon Tribal Council
- Levelock Village Council
- Manokotak Village Council
- Kokhanok Village Council
- Naknek Village Council
- Nanwalek IRA Council
- Native Tribe of Kanatak
- New Koliganek Village Council
- New Stuyahok Traditional Council
- Ninilchik Traditional Council
- Nondalton Tribal Council
- Pedro Bay Village Council
- Pilot Point Tribal Council
- Port Graham Tribal Council
- Port Heiden Village Council
- Portage Creek Village Council
- Seldovia Village Council
- Traditional Council of Togiak
- Twin Hills Village Council
- Ugashik Traditional Council
- United Tribes of Bristol Bay

RUSHED PROCESS?



Alaska NEPA Process (Years)



Resolution of DEIS Issues



TSF “CATASTROPHIC FAILURE”



Significant discussion about including a catastrophic failure in the PFEIS

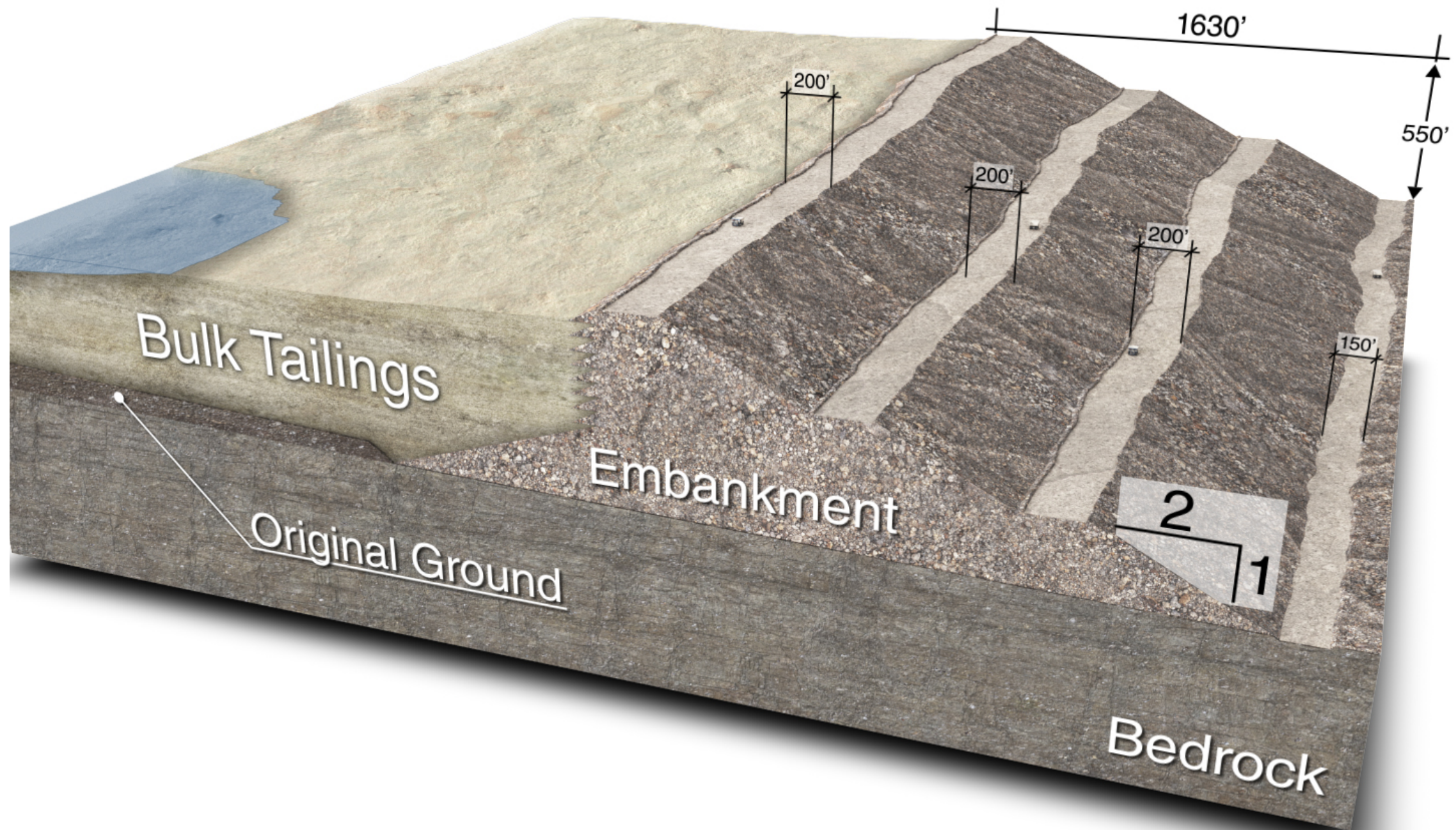
USACE completed extensive work on this issue and concluded it was:

- Not appropriate under NEPA and inconsistent with past practice
- Not technically appropriate given PLP’s proposed design

How was issue further addressed:

- Evaluated four recent catastrophic failures and their causes in the context of the PLP design
- Reviewed two existing catastrophic failure models (EPA & Lynker)
- Explained why they were technically inappropriate for the PLP design
- Explained why the three scenarios developed in the Failure Modes and Effects Analysis and evaluated in the DEIS were appropriate

PROPOSED TSF DESIGN



ACCORDING TO THE PFEIS



“However, the Applicant’s design would have only a small surface pond, and not a full water cover. Without a full water cover, bulk TSF tailings would not be triggered to experience static liquefaction and flow. Therefore, the modeled release and resulting impacts are an overestimation of a reasonable failure scenario.”

SEISMIC ANALYSIS



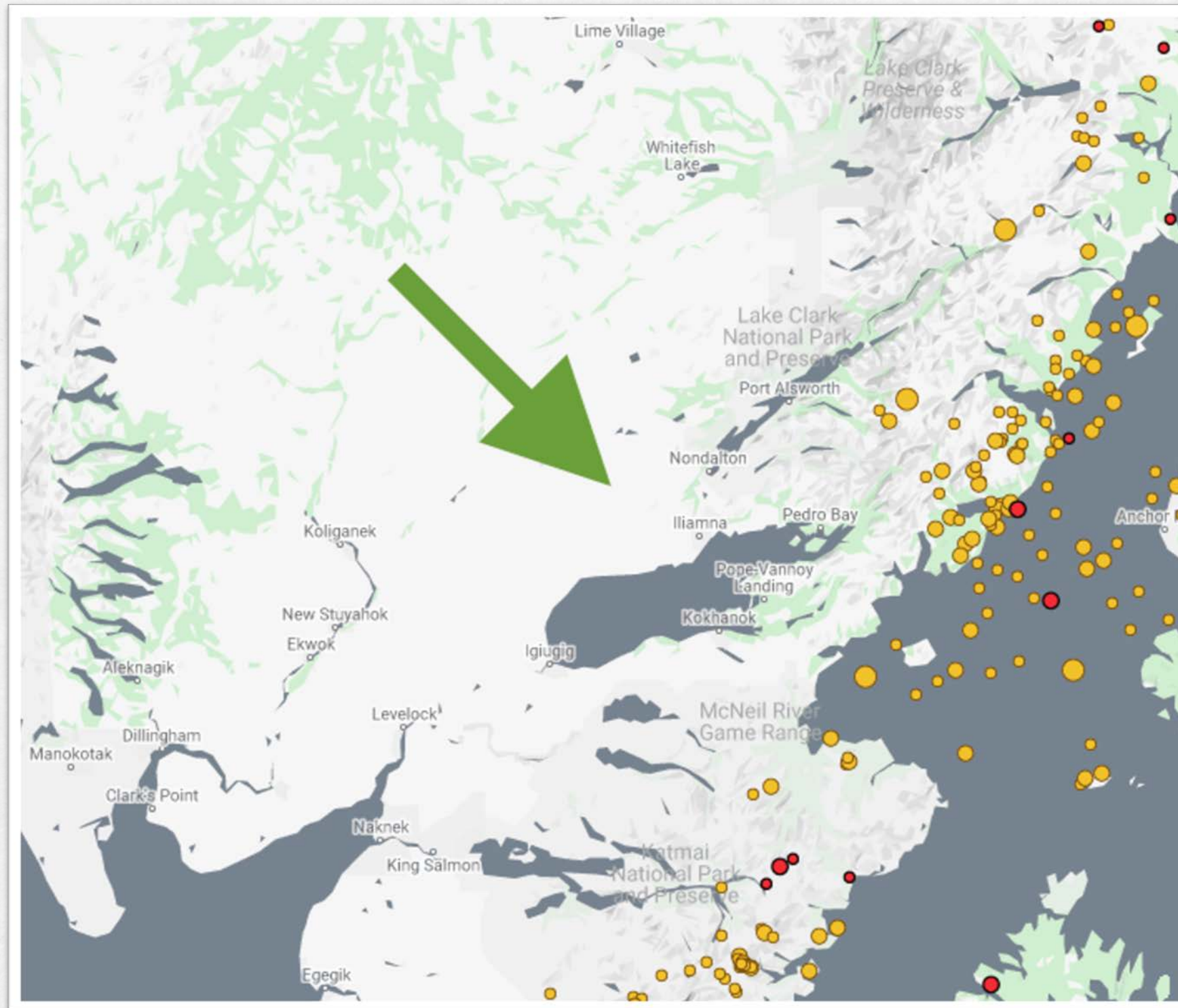
Concerns expressed about seismic activity and dam embankment stability

How was issue further addressed:

- PLP provide additional data including:
- Updated seismic hazard baseline report to 2019
- Additional engineering analysis of dam embankments

Modifications were also made to facilities in response to FMEA results and DEIS analysis

MINIMAL ACTIVITY AT MINE SITE



ACCORDING TO THE PFEIS



“Based on the conceptual designs, and assuming current standard of engineering practice would be followed, the likelihood of global instability of the major embankments was considered to be very low (i.e., less than 1 in 10,000 probability) by geotechnical experts in the EIS-Phase FMEA”

WETLANDS & COMPENSATORY MITIGATION



Viewed as data gap in DEIS by commenters

USACE approach was NEPA appropriate and consistent with past practice

How was issue further addressed:

- Updated/fully mapped wetlands for all alternatives
 - PJD accepted as complete
- Detailed Draft Final CMP included in PFEIS
- Includes detailed information on proposed mitigation
- Out of kind approach has many positives for Alaska
- Consistent with 2018 USACE/EPA MOU

WATER MODELING & WATER QUALITY



Broad range of comments on water related issues

How was issue further addressed:

- Geochemistry
 - Provided additional analysis to address EPA concerns about applicability of dataset
- Groundwater Model
 - New and improved groundwater model submitted
 - More expansive and detailed analysis submitted
- Updated Watershed Model and Water Balance
 - More expansive and detailed analysis submitted
- Updated and improved design for all Water Treatment Plants
 - Modified designs to address potential concerns
 - Provided flowsheets for all WTP's through closure

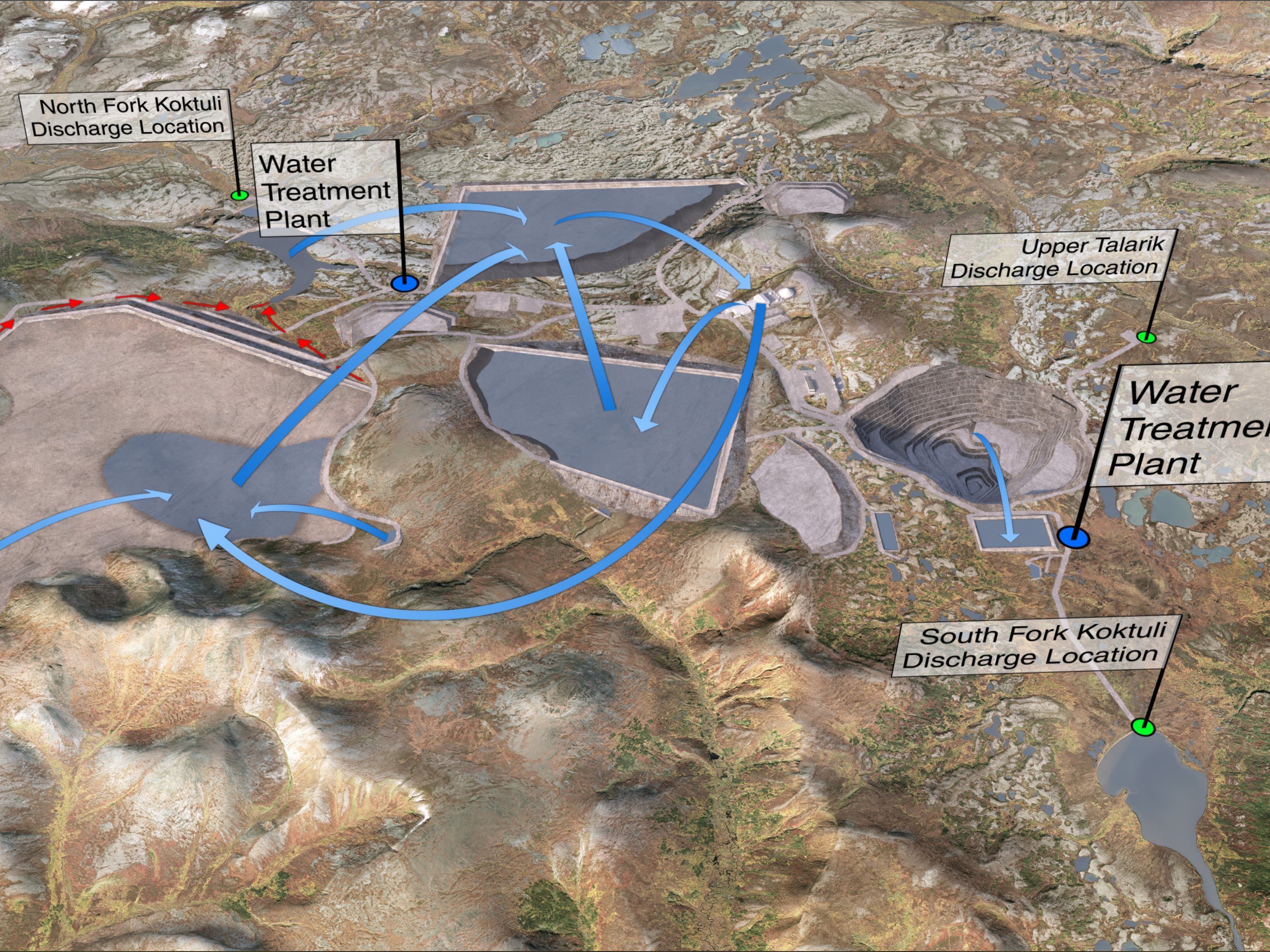
North Fork Koktuli
Discharge Location

Water
Treatment
Plant

Upper Talarik
Discharge Location

Water
Treatmen
Plant

South Fork Koktuli
Discharge Location



ACCORDING TO THE PFEIS



“There would be no effects on any community groundwater or surface water supplies from the changes in groundwater flows at the mine site.”

“Alterations in the environmental mass load of metals, nutrients, and ions are not expected to result in adverse environmental impacts.”

MANAGEMENT PLAN DETAILS



Commenters requested additional detail on monitoring and mitigation

How was issue further addressed:

- PLP provided draft operating plans
 - Reclamation and Closure Plan
 - Fugitive Dust Control Plan
 - Restoration Plan
 - Invasive Species Management Plan
- PLP provided detail on future plan commitments
 - Wildlife Management
 - Aquatic Resources
 - Ground & Surface Water Monitoring Plans
 - Waste Management
- State provided additional detail on their process
 - Explains how details will be addressed in State permitting

ACCORDING TO THE PFEIS



“Many of the permits required for approval of the Pebble Project are under the jurisdiction of the State of Alaska (see Appendix E). To coordinate state agency permitting and integrate federal and local permitting for large mining projects, the State of Alaska has developed a Large Mine Permitting Team (LMPT) process. The LMPT is an interagency group of regulatory experts that works cooperatively with large mine applicants and operators, federal resource agencies, and the Alaska public to ensure that projects are designed, operated, and reclaimed in a manner consistent with state laws and regulations.”

EXPANDED DEVELOPMENT SCENARIO



Commenters called for the “expanded development scenario” to be a full alternative

- Not allowed under NEPA
- No precedent for this approach

How was issue further addressed:

- Footprint and associated operating scenario already provided for DEIS
- Expanded environmental analysis of scenario under the cumulative impacts section
- Modeled dewatering impacts of 7 billion ton pit

ACCORDING TO THE PFEIS



“Future expansion of the mine has been determined reasonably foreseeable by USACE, and an expansion scenario developed and analyzed as a cumulative effect.”

“Estimates of permanent footprint acreage, direct wetlands impact acreage, miles of direct stream impacts, and number of stream crossings associated with expansion of the Pebble mine have been developed using GIS and are included in specific resource sections.”

FISH HABITAT IMPACTS



Multiple comments regarding fish habitat impacts and the “portfolio affect”
(Schindler et al, 2010)

How was issue further addressed:

- Updated analysis of fish habitat impacts
 - Additional work sessions held on PLP baseline data and fish habitat modeling
 - Updated PHABSIM fish habitat modeling to daily timestep
- USACE expanded and clarified fish habitat impacts analysis section in the PFEIS

ACCORDING TO THE PFEIS



“In this EIS, the effect to the Bristol Bay portfolio is considered by evaluating the amount of habitat and salmon production that would be lost. No long-term measurable changes in the number of returning salmon are expected, nor is genetic diversity expected to change; therefore, the impact to the Portfolio Effect would not be discernable.”

“Impacts to returning salmon are not expected to be measurable and given the vast breadth and diversity of habitat (and salmon populations) in the Bristol Bay watershed, impacts on the Portfolio Effect are not likely to be discernible.”

FISH & WILDLIFE / SUBSISTENCE IMPACTS



Broad range of comments on fish, wildlife, and subsistence impacts

How was issue further addressed:

- Project design adapted to reduce impacts
 - Port design changed, moved road on north side, modified bridge designs
- Provided details on mitigation and management measures to address wildlife impacts
- Provided additional details on operating plans for road/port

ACCORDING TO THE PFEIS



“Overall, impacts to fish and wildlife would not be expected to impact harvest levels, because no population-level decrease in resources would be anticipated.”

“There would be no measurable change in the number of returning salmon and the historical relationship between ex-vessel values and wholesale values. In addition, there would be no changes to wholesale values or processor operations expected for the Applicant’s Preferred Alternative. Under normal operations, the alternatives would not be expected to have a measurable effect on fish numbers and result in long-term changes to the health of the commercial fisheries in Bristol Bay.”

Parallel Processes



SECTION 7 CONSULTATIONS



Comments received from NMFS and USFWS

USACE has been responsive to their major request

- BA documents expanded to full project lifecycle

Project design adapted to address their concerns around marine mammals

- Port design, lighting, anchor design, vessel speed limits

USACE is working with them on comments to revised documents

COMPENSATORY MITIGATION



PLP has submitted an “out-of-kind” proposal

- No viable “in-kind” alternatives in the region
- Significant effort was made to evaluate all options

Choice

- Use the money to address known issues impacting water quality and fish habitat in the region
- Use the money to “tie-up” land 100s of miles from site with no real improvement to water quality or fish habitat

Proposal in accordance with 2018 USACE/EPA MOU

Addressing three major Alaska issues

- Village water and sewer, impaired fish passage, beach pollution
- These are State wide issues that will require billions of \$ to address

This model has great potential to do good in Alaska and offset the need for government dollars to fix these problems

MARINE DEBRIS / AMAKDEDORI BEACH



TOP TAKE-AWAYS TO DATE



Impacts to fish and wildlife would not be expected to impact harvest levels (ES 35)

Impacts to anadromous and resident fish populations from these direct habitat losses would be expected to fall within the range of natural variability (ES 69)

There would not be measurable change in the number of returning salmon...would not be expected to have a measurable effect on fish numbers (ES 76)

Communities near the mine site would likely see a beneficial impact of higher employment rates (ES 29)

Would generate revenue for the State of Alaska and for municipal governments (ES 30)

Could reduce or eliminate the current local population decline because of the increase in employment opportunities (ES 30)

CONCLUSIONS



USACE has been responsive to ALL the comments received

Significant effort to address major concerns identified by EPA, DOI, and others

- Additional technical workshops to resolve issues
- Additional technical work completed and included in PFEIS
- Additional opportunity for agencies to review and comment on PFEIS

USACE has addressed the identified issues while remaining compliant with the requirements of NEPA

Just because 3rd parties don't like the conclusions, it does not mean that the USACE conclusions are incorrect

QUESTIONS?

