



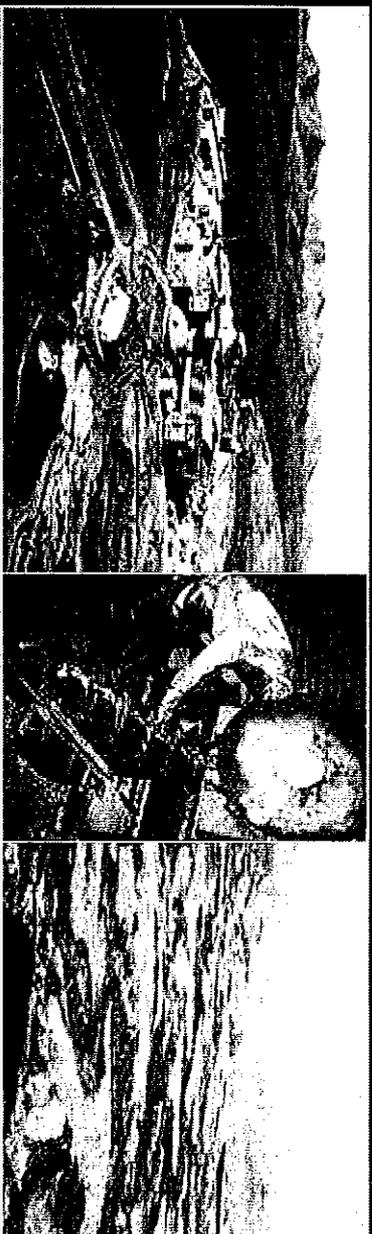
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INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
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Proposed Pebble Mine Project Alaska

Briefing for Administrator Lisa Jackson



EPA Region 10
Seattle, WA

January 13, 2010



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Presentation Overview

- Description of the proposed Pebble Mine
- Description of resources at risk
- Issues of concern
- EPA's regulatory role – current and future
- Future options to positively impact project



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Key Messages

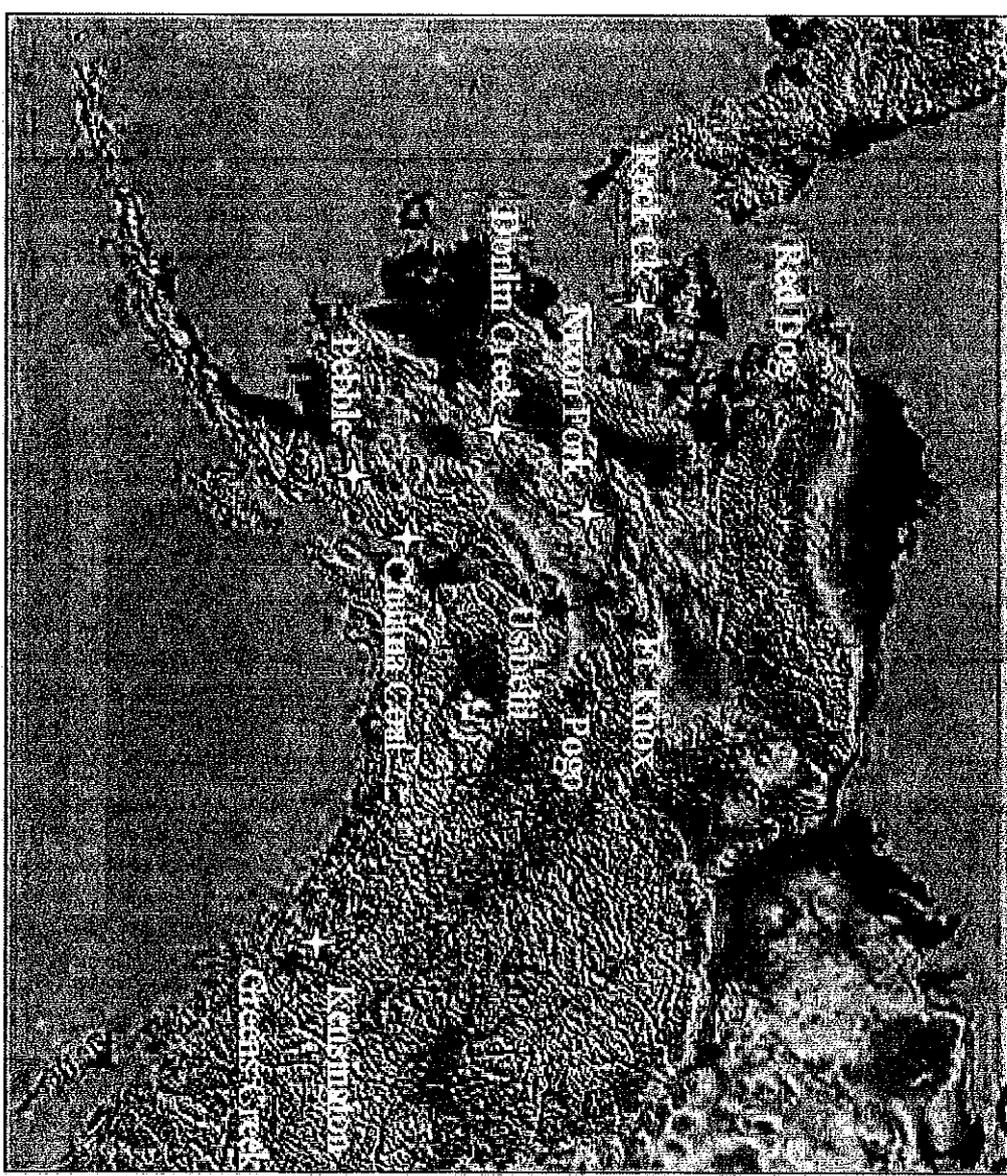
- Would be one of the largest mines in North America
- Located in a remote, environmentally sensitive location within the headwaters of a world class salmon fishery
- Unique, high-value Native Alaskan subsistence uses
- Project beyond the capability of current resources
- EPA has Key Regulatory Review Role

Alaska Operating and Proposed Mines

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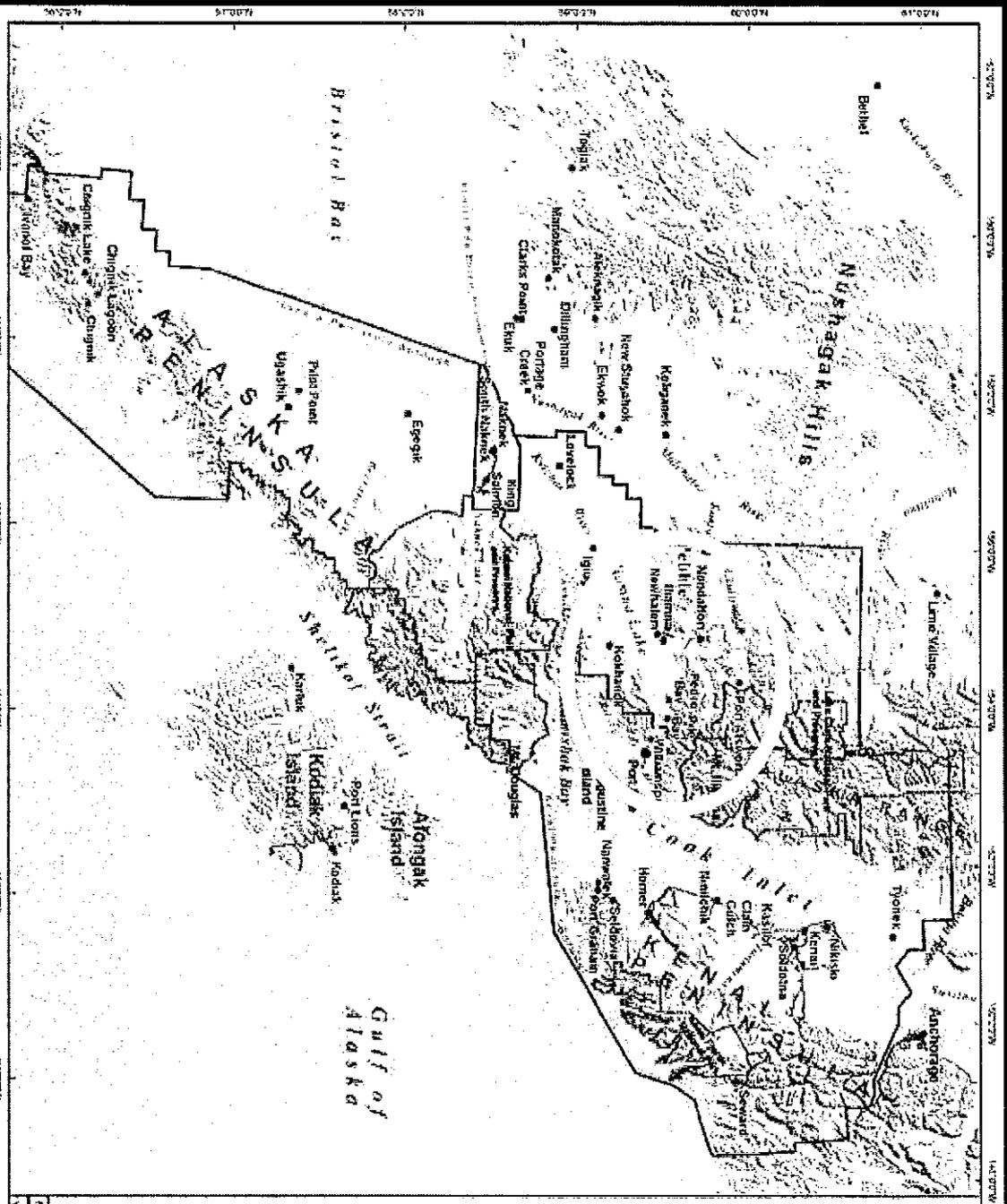
★ Producing mine

✦ Developing and major exploration projects



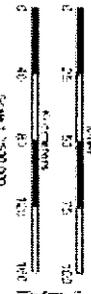
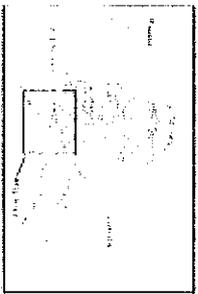
U.S. GEOLOGICAL SURVEY
 BUREAU OF LAND MANAGEMENT
 1225 NORTH MOUNTAIN AVENUE
 DENVER, COLORADO 80202
 303-733-7000
 WWW.BLM.GOV
 1997-2002

Pebble Location



Regional Map

- Legend**
- Contourlines
 - Possible Pebble Site
 - ADOPTED ROAD STUDY STREAM
 - Existing Facility
 - Deposit Site
 - ▭ National Park
 - ▭ National Preserve
 - ▭ Borough Boundary



Alaska Blue-Plane Zone & Islands Project
 1985 North American Datum
 Elevation 1000'
 Date 10/10/87
 Author: R. J. [Name]



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Proposed Pebble Mine

- **Project Proponent: Pebble Partnership**
 - **Joint venture between Northern Dynasty and Anglo American LLC**
- **Land Ownership:**
 - **State land**
 - **Pebble Partnership holds mineral rights on 153 square miles**
 - **Proposed road would cross native allotments**



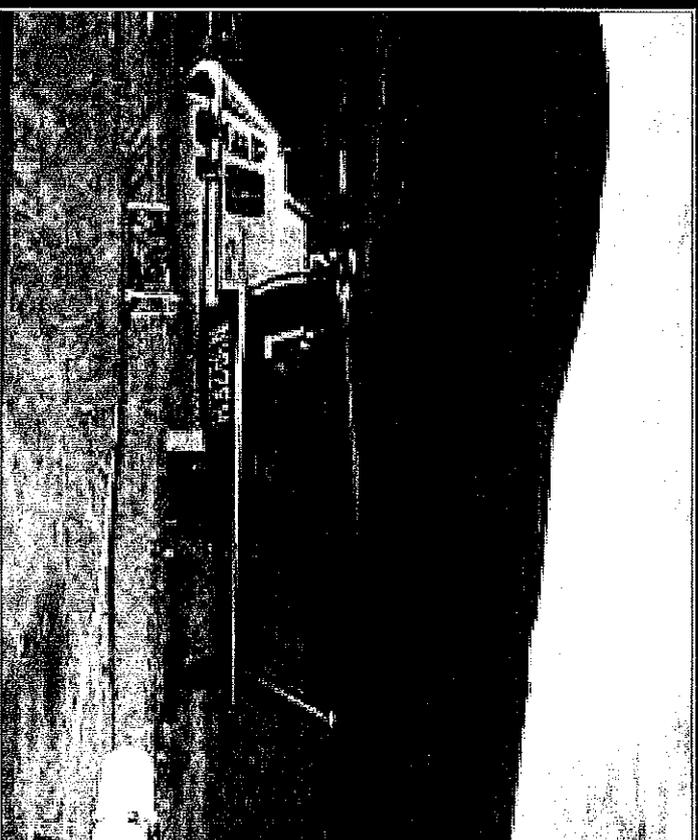
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Pebble – Current Status

- Exploration
- Environmental baseline data collection
- Mine permit applications have not been submitted
- Possible submittal date – 2011?





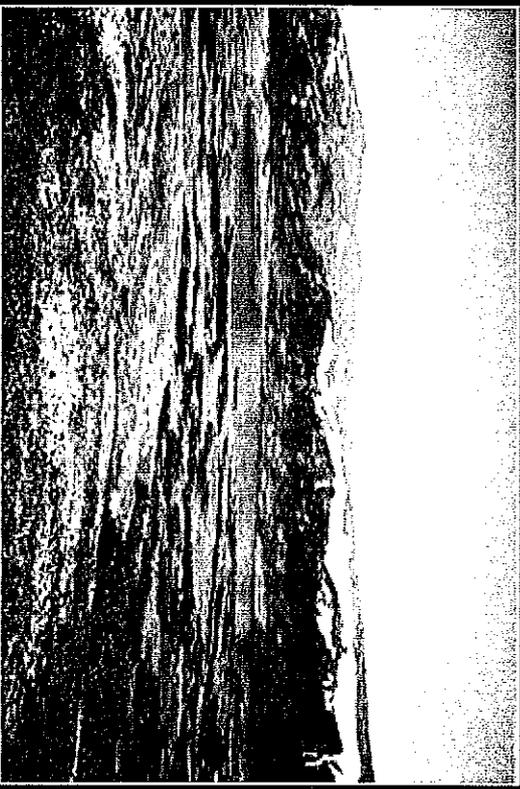
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Pebble Project Proposal

- Current proposal:
 - 120,000 to 220,000 tons of ore processed/day
 - 30 + year mine life
 - Produce copper and molybdenum concentrates, gold and silver
- Project components:
 - Mine and mill
 - Access to/from the mine site (road)
 - Power



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Bingham Canyon, UT



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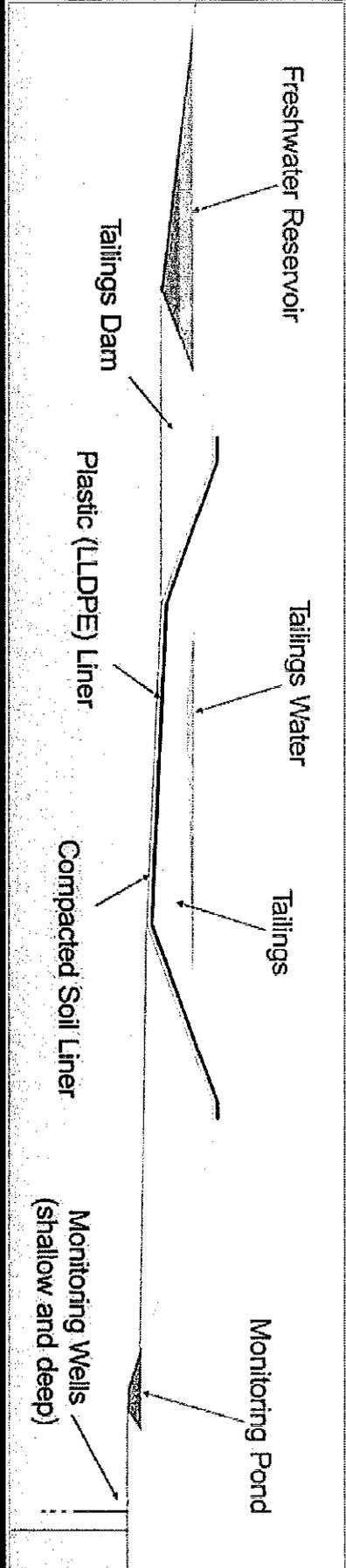
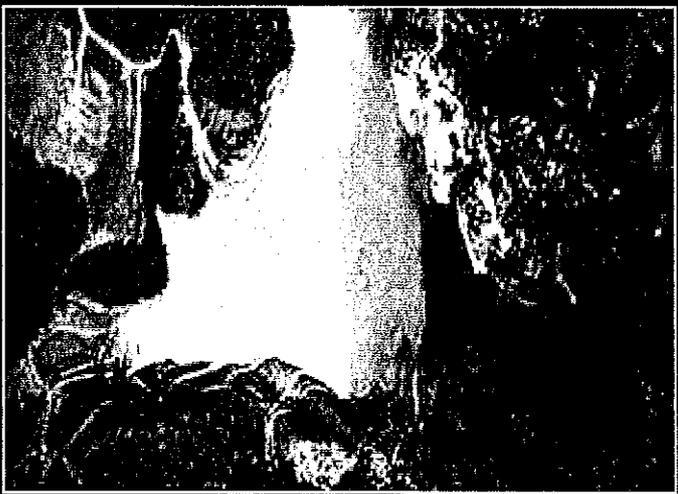
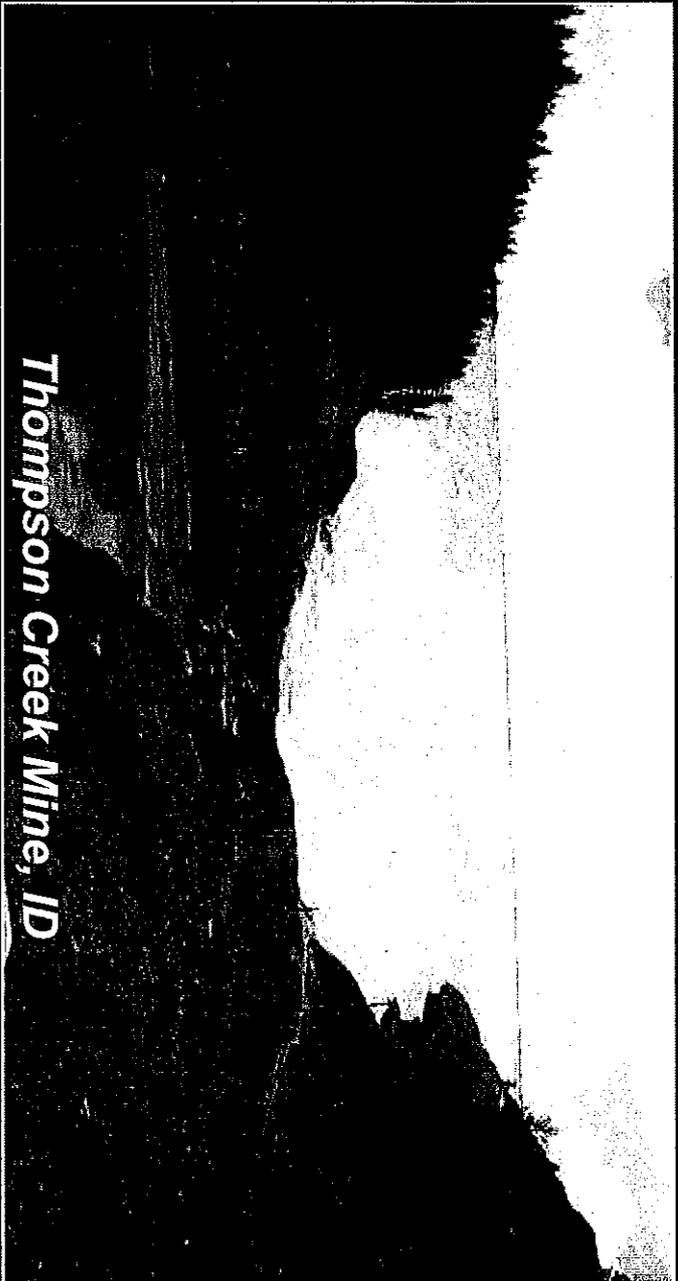
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Proposed Pebble Tailings Disposal

- Tailings are ground up wastes from processing; includes solids and process wastewater.
- Amount = approx. 4.5 billion tons
- Tailings proposed to be disposed in ponds created by damming valleys.
- Approx. tailings pond size: > 700 foot-high and 6 mile long dam(s)

Tailings Impoundment

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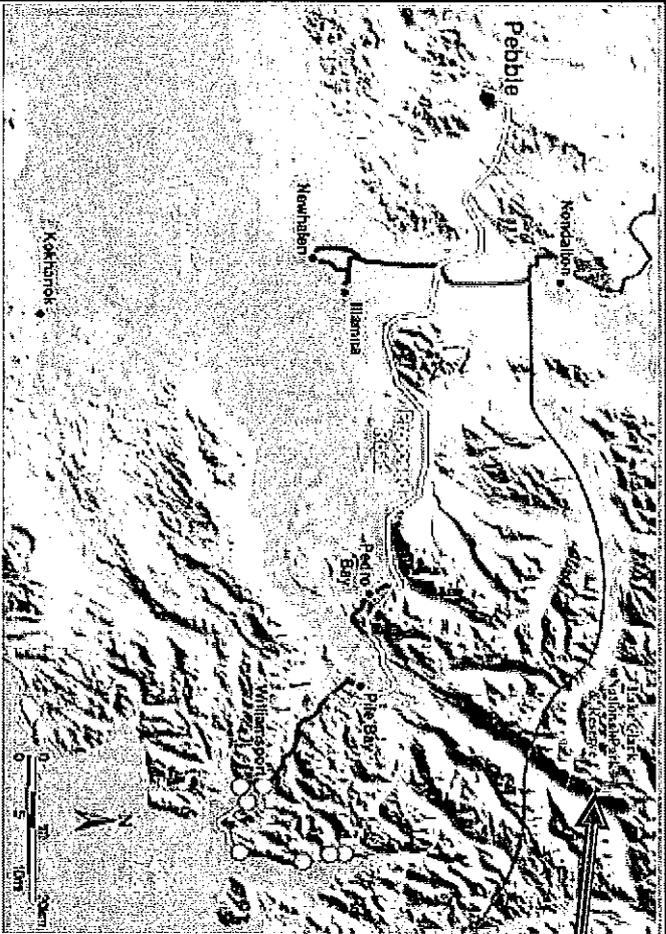
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Pebble Mine Access

- Port site in Cook Inlet
- 86 to 104 mile road from port to mine site and adjacent pipelines



**Lake Clark
National Park
and Reserve**



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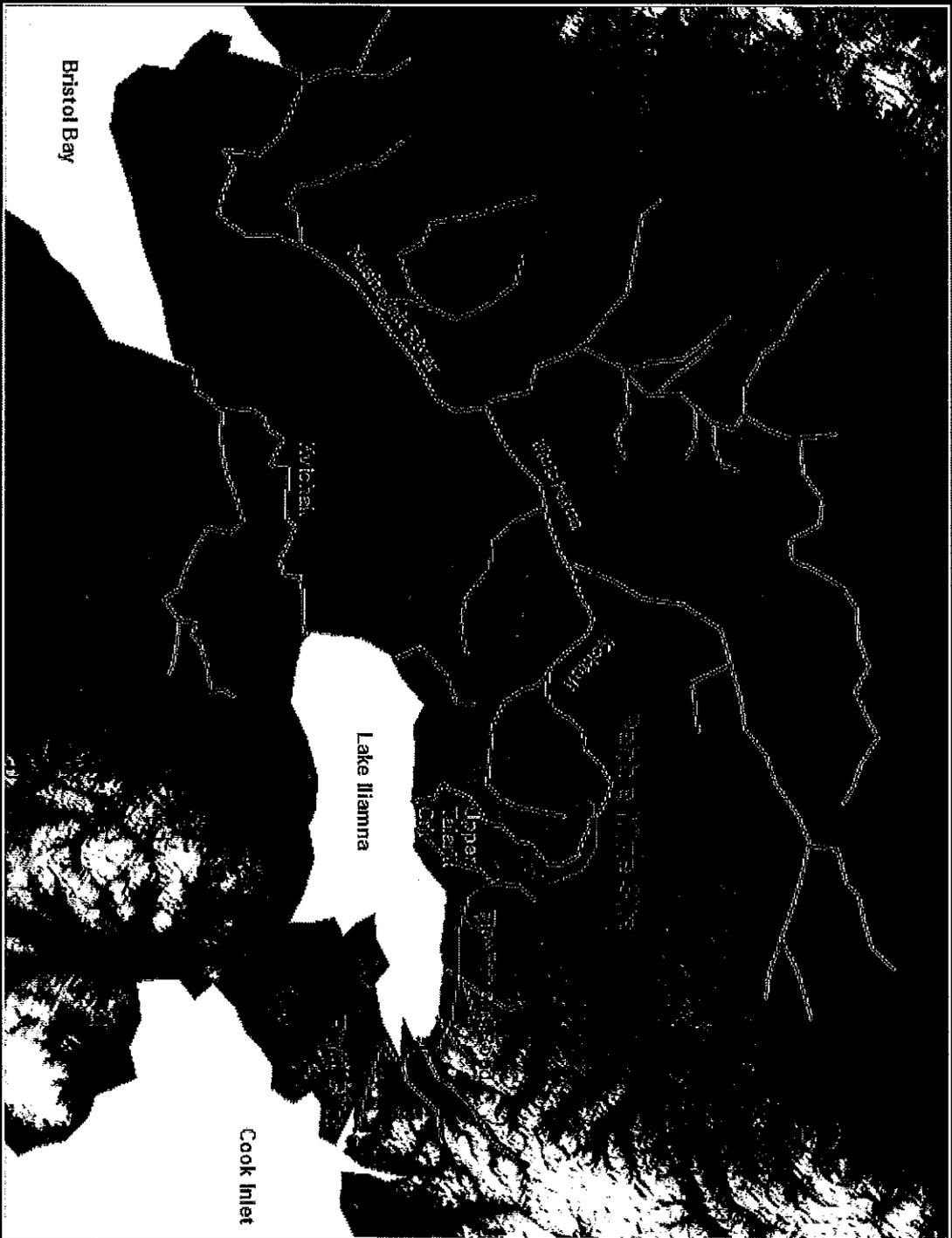
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Resources at Risk

- Located in headwaters of pristine Bristol Bay watershed and world class fishery.
- Potential for impacts to wetlands, surface waters, aquatic resources, wildlife (caribou and moose), vegetation, ESA-listed species
- Important subsistence and traditional use area for native Alaskan communities

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Surface Waters





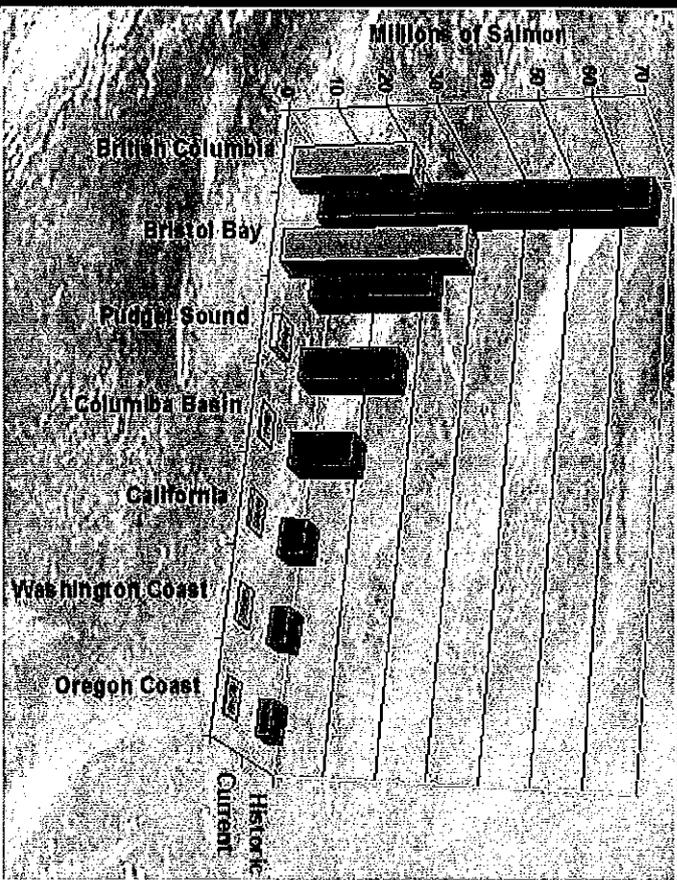
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Salmon Fishery

- Nushagak and Kvichak rivers produce 13% of Alaska's salmon & 1.6 billion salmon smolts which influence the biomass of North Pacific Ocean
- Commercial value of salmon from these rivers range \$30 – ~70 million annually
- In all of North America, only Bristol Bay maintains historic levels of wild salmon



**Historic and Current West Coast
North American Salmon Run Size**



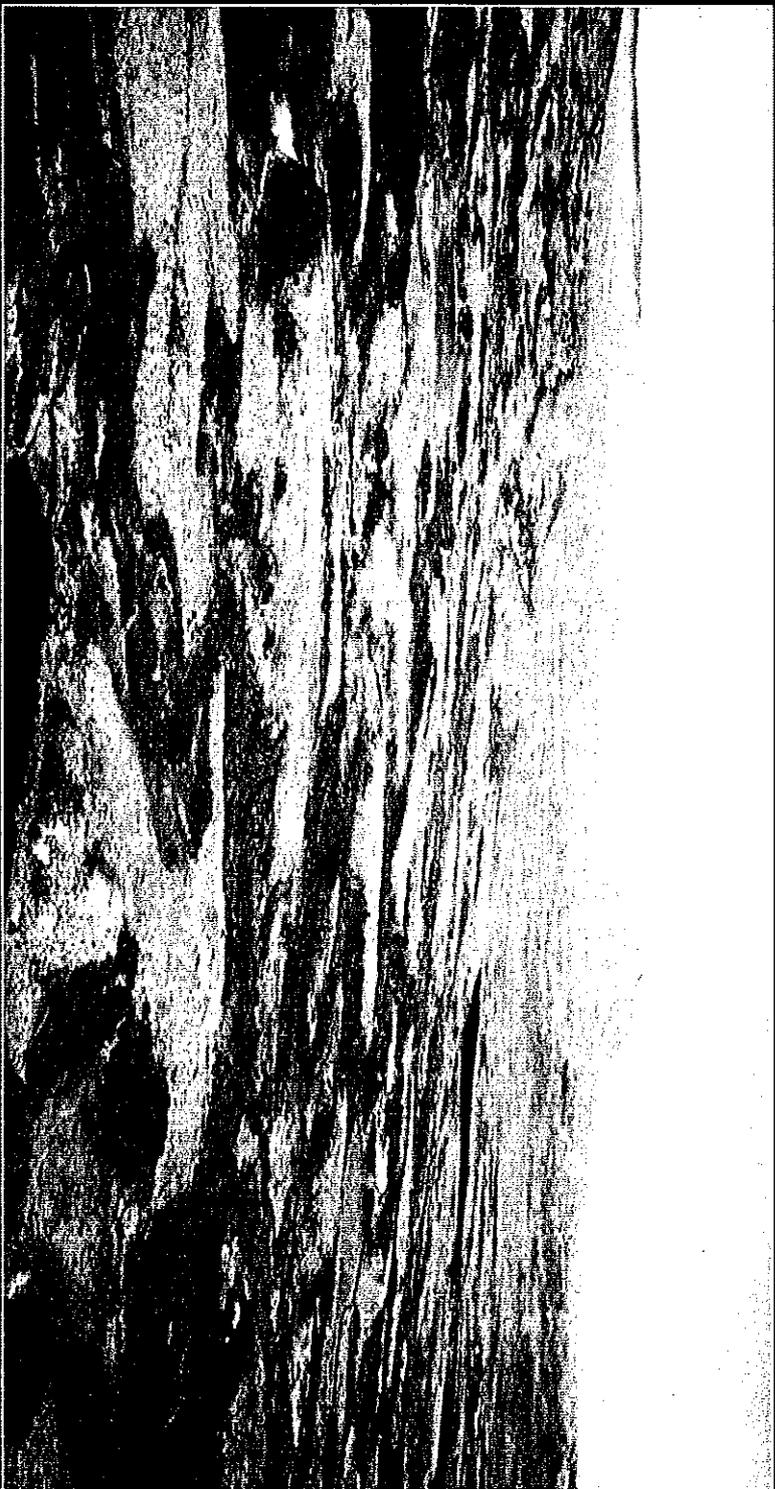
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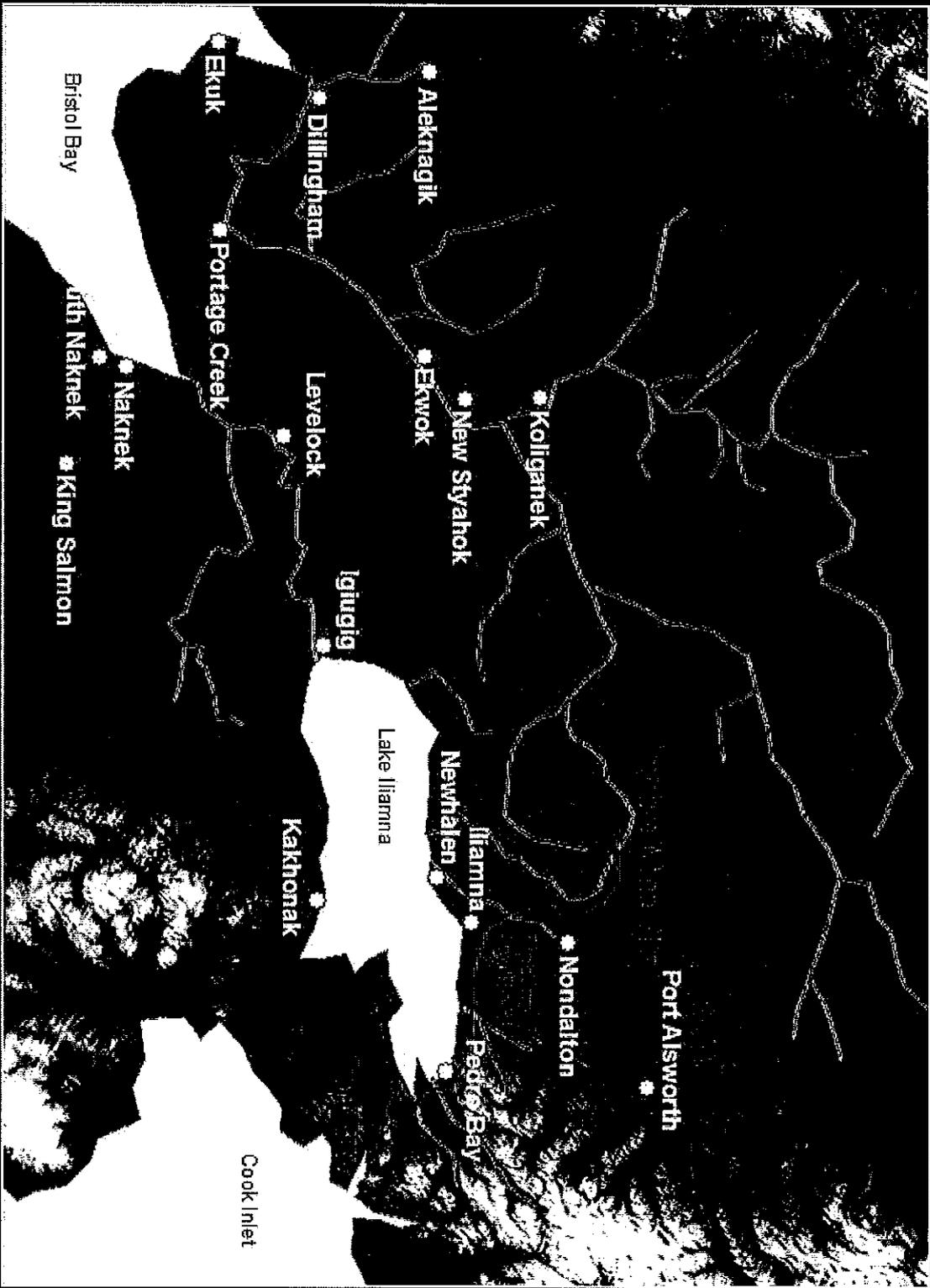
Wetlands

- Estimated 5,000 – 9,000 acres of wetlands impacts



Alaska Native Villages

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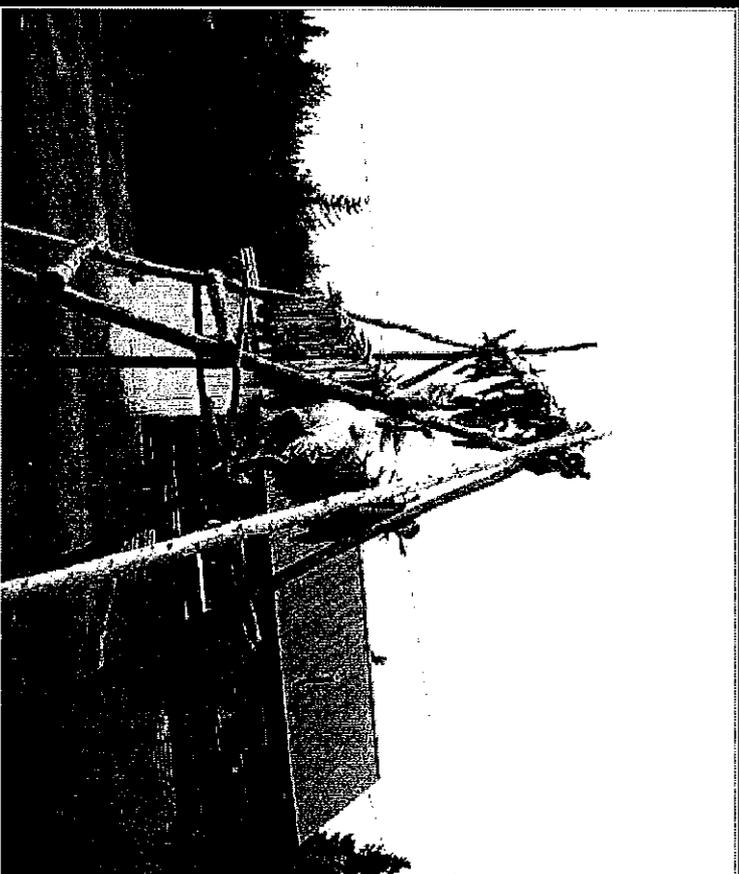
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Tribal Concerns

- Important subsistence and traditional use area – salmon, caribou, berry-picking, etc.
- State NPDES authorization
- Corps as the EIS lead
- Mixed tribal viewpoints





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Regulatory Process & Future EPA Role



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Seattle, WA**



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Multiple Agencies Regulate Mining

- Federal Agencies
 - Land Management Agencies:
USFS, BLM, NPS
 - EPA
 - Army Corps of Engineers
 - USFWS
 - NOAA
- State Agencies
 - Environmental Department
 - Natural Resources
Department
 - Fish and Game
 - Department of Law
 - Historic Preservation Office
- Tribal Governments
- Local
 - Counties and (in Alaska)
Boroughs



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Many Permits and Authorizations Required for Mining in Alaska

STATE

- Plan of Operations (DNR)
- Reclamation and Bonding (DNR)
- Waste Management Permits and Bonding (ADEC)
- Certification of NPDES and ACOE Permits (ADEC)
- Sewage Treatment System Approval (ADEC)
- Air Quality Permits (ADEC)
- Fish Habitat and Fishway Permits (ADFG)
- Water Rights (DNR)
- Right of Way/Access (DNR/DOT)
- Tidelands Leases (DNR)
- Dam Safety Certification (DNR)
- Cultural Resource Protection (DNR)
- Monitoring Plan (Surface/Groundwater/Wildlife) (DNR/DEC)
- Coastal Zone Consistency Determination (DNR)

FEDERAL

- US EPA Section 402 NPDES Water Discharge Permit
- US EPA Air Quality Permit review
- US ACOE Section 404 Dredge and Fill Permit
- US ACOE Section 10 Rivers and Harbors Act
- US ACOE Section 106 Historical and Cultural Resources Protection
- NMFS Threatened and Endangered Species Act Consultation
- NMFS Marine Mammal Protection Act
- NMFS Essential Fish Habitat
- NMFS Fish and Wildlife Coordination Act
- USFWS Threatened and Endangered Species Act Consultation
- USFWS Bald Eagle Protection Act Clearance
- USFWS Migratory Bird Protection
- USFWS Fish and Wildlife Coordination Act



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How is EPA Involved in Review and Permitting of Mining?

- National Environmental Policy Act
- Clean Water Act
- Safe Drinking Water Act
- Clean Air Act

▪ **EPA Does Not Regulate:**

- Exploration Activities
- Solid Wastes from mining
- Reclamation and closure
- Financial assurance

- *These are regulated by states and, on federal land, by US Forest Service and BLM*



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NEPA

- Corps of Engineers likely to be NEPA lead agency *

The EIS will assess:

- air quality
- surface water quality
- ground water quality
- wetlands
- vegetation
- wildlife
- fish & aquatic resources
- geochemistry
- geotechnical stability
- socioeconomics
- land use & recreation
- subsistence
- cultural resources
- visual resources
- health
- environmental justice
- cumulative impacts
- noise

* PLP, State, tribes, and the Corps would prefer EPA lead.



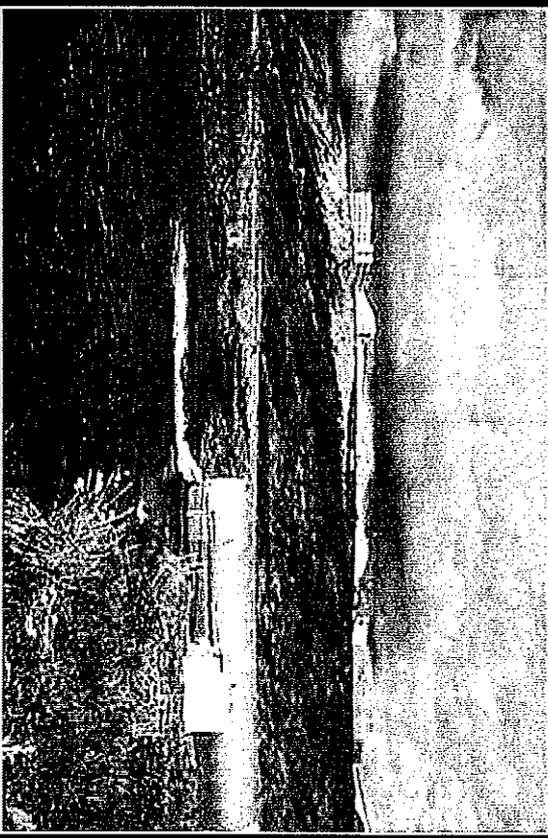
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CWA 402 NPDES Permits

- NPDES permits required for the discharge of pollutants from point sources to waters of the U.S.
- Needed for discharges from tailings ponds, mine drainage, storm water.
- EPA delegated NPDES program to AK. In Nov. 2010, AK will begin writing mining permits.
- EPA role = oversight of state





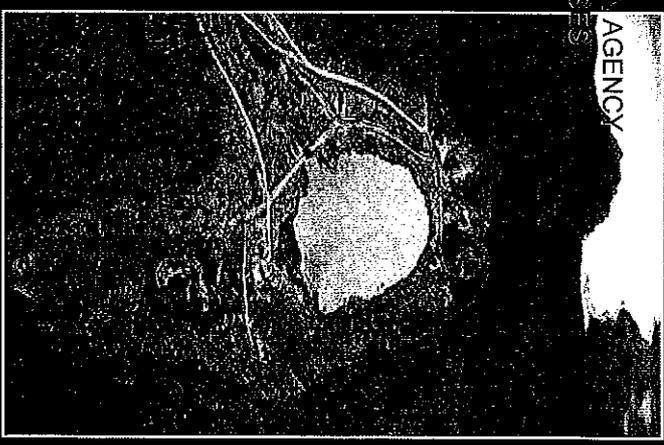
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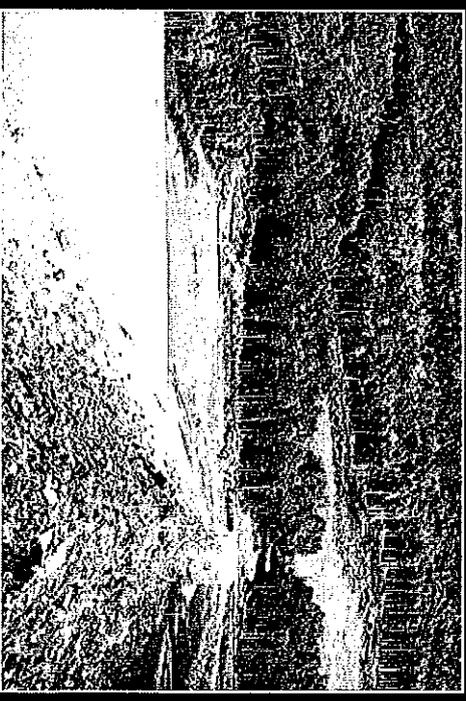
CWA 404 Wetlands Permits

- Permits issued by Corps for dredge or fill activities in wetlands and waters of the U.S
- Will be required for roads, gravel sites, tailings facility, etc.
- Corps must select least environmentally damaging alternative
- EPA can veto under 404(c)
- Tribal consultation



Kensington (AK)

Lower Slate Lake



Parallel Process

ENVIRONMENTAL PROTECTION AGENCY

**EIS
Process**

**Federal
Process**

**State
Process**

**Local
Process**

Corps
Wetlands

SHPO

Borough Plan

Notice of Intent

E.O. 13175
Tribal Consultation

National Historic
Preservation Act
106 Consultation

City Plan

Scoping

E.O. 12898
Environmental Justice

ADFG
Fish Habitat
ADNR

Tribal Village Plan

Draft EIS

USFWS/NMFS
Endangered Species Act
Consultation

Operation Plan
Reclamation Plan

Final EIS

NMFS
Magnuson-Stevens
Fisheries Management Act
EFH Assessment

ADEC
APPDES Permit
Waste Management
Air Quality Monitoring Plan
401 Certification

Record of Decision

Federal
Permit, Certification,
Approval

State
Permit, Certification,
Approval

Local
Consistency



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EPA Involvement To-Date

- Established project manager & project review team
- Review baseline environmental data & submit comments to PLP
- Coordinate with other agencies
- Site visits
- Meetings with tribes and other groups
- Summer 2010 – Tribal Mining Training in villages



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Pebble - Issues

- Technical/Scientific
 - Very large mine site and waste sites
 - Located in headwaters of world class salmon fishery
 - Potential for acid rock drainage
 - Long-term closure and financial assurance
 - Transportation risks associated with road and port traffic
- Tribal
 - Subsistence and socio-cultural impacts
 - How to effectively involve 20+ tribes in the region
- Regulatory
 - One of first new mines that will be subject to APDES
 - Loss of tribal consultation, EPA lead NEPA role



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Future Options

- Project-specific options to influence project:
 - Assign lead role in developing EIS
 - 404(c) veto either pre-emptive, during EIS, or after EIS
- Regulatory change that could influence project:
 - Change existing CWA 402/402 permitting framework that was upheld in the June 2009 Kensington Supreme Court decision (404 applies to discharge with the “effect of fill” notwithstanding otherwise applicable effluent limitation guidelines developed under CWA section 306).
 - EPA cross-office workgroup exploring options for improving CWA regulation of hard rock mining.



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Options for Improving CWA Regulation of Hard Rock Mining

- Options include:
 - Strengthening 404(b)(1) Guidelines review process & clarifying technical review factors under current approaches.
 - Revising the 2002 Fill Rule to require compliance with applicable ELGs.
 - Revising the waste treatment exclusion (WTE) to prohibit or limit use of waste treatment systems in WUS.
- High level meeting with Army/Corps on 11/20/09 to discuss options.
- Follow up meeting to be scheduled.



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EPA Workgroup Recommendation

- **Require compliance with applicable ELGs; WTE invoked on narrow case-by-case basis.**
 - Significant environmental benefit due to application of ELGs, in combination with additional scrutiny in evaluating use of WTE.
 - Continues to provide disposal options, but with additional restrictions or conditions and a more prominent EPA role in applying WTE on a case-by-case basis.
- **Implementation Considerations:**
 - All options result in rescinding EPA 2004 Mining Memo.
 - Requires narrow amendment to Fill Rule; rulemaking and/or guidance to clarify and limit WTE.
 - Essential that EPA and Army Corps coordinate effectively in this policy review; recommended approach requires joint rulemaking.
 - Timing is critical due to implications on future mining projects (like Pebble).