Bristol Bay Watershed Assessment & CWA 404(c) Proposed Determination: *Pebble Deposit Area, Southwest Alaska*

February 2017

Overview

- Background: Bristol Bay Watershed Assessment (2/2011 – 1/2014)
- Background: Clean Water Act Section 404(c)
- Key points of 404(c) Proposed Determination (7/2014 – TBD)
- Status

Why an Assessment?

- Since 2001, Northern Dynasty Minerals (NDM) and Pebble Limited Partnership (PLP) have been planning a mine at Pebble deposit
- Majority of stakeholders express significant concerns about potential mine
  - "I'm not opposed to mining, but it is the wrong mine for the wrong place" (former Senator Ted Stevens – 2008)
- 2010 – EPA received competing sets of requests
  - Requests to immediately use CWA 404(c) authority to protect Bristol Bay fishery from impacts of large-scale mining, specifically Pebble Mine
  - Requests to wait for mine to be reviewed during 404 permit review process
- Instead in February 2011, EPA initiated assessment to use science to inform any future decision-making
  - Using EPA's CWA Section 104 authority to conduct such scientific studies
- Despite repeated assurances to stakeholders that a CWA Section 404 permit application to the Corps would be imminent, PLP/NDM have never submitted one
  - Created climate of "anxiety, frustration, and confusion" in Bristol Bay for over a decade (Senator Lisa Murkowski – July 2013)

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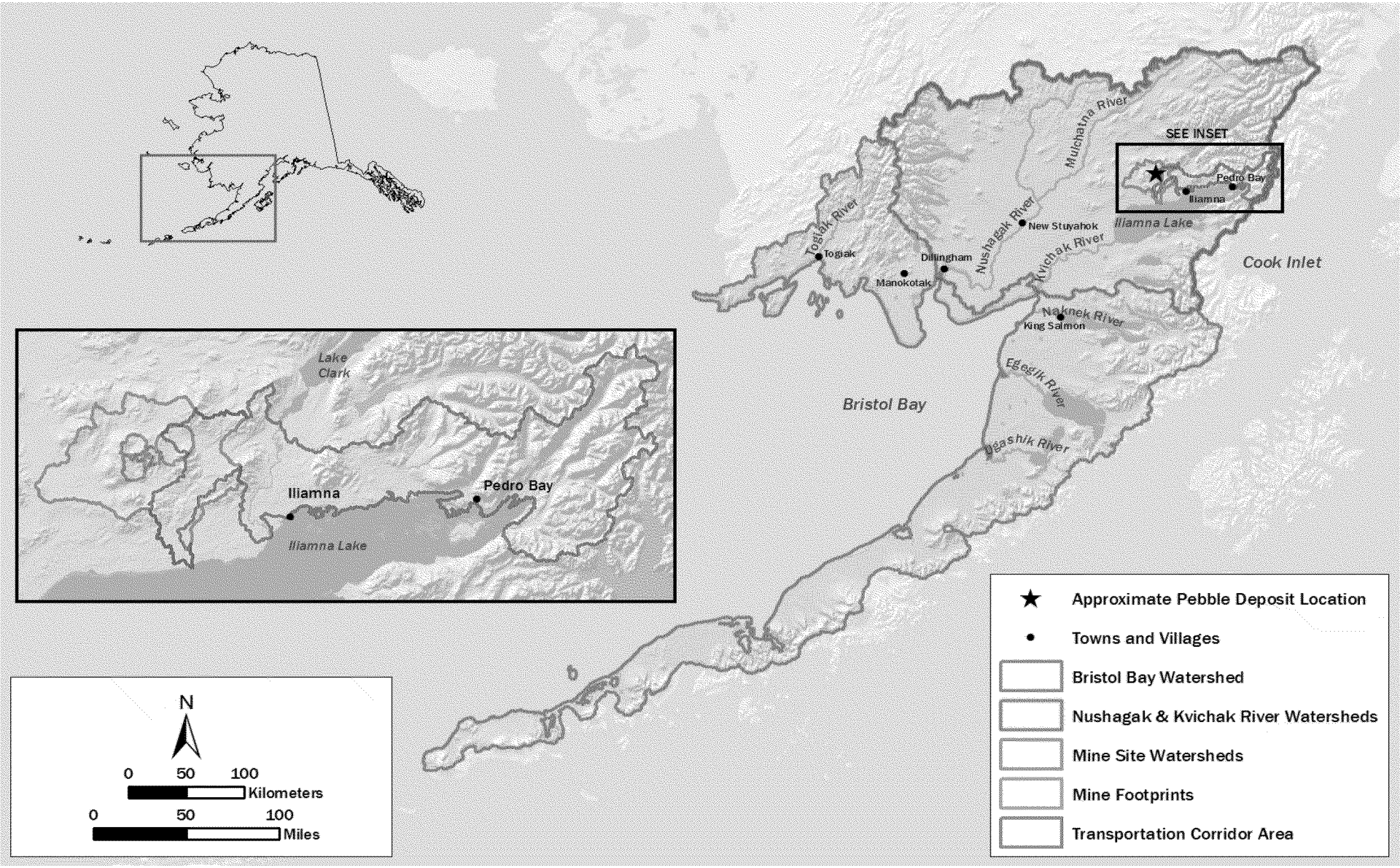
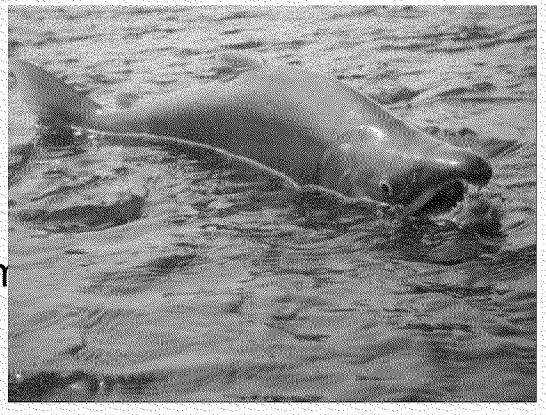
Bristol Bay and Areas of Study



Bristol Bay Assessment

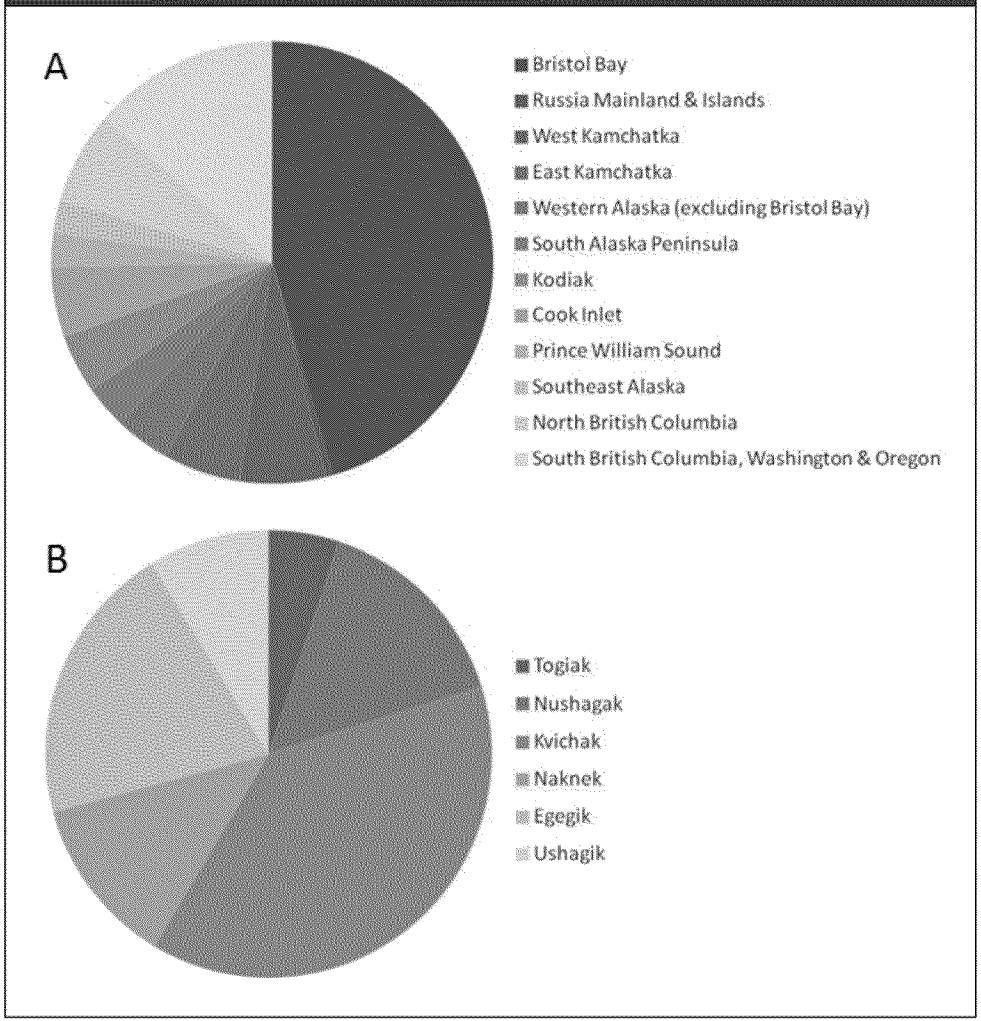
- Purpose:
  - Characterize the biological and mineral resources of the Bristol Bay watershed
  - Increase understanding of the potential impacts of large-scale mining on the region's fish resources
  - Inform future decision-making
- Ecological Risk Assessment evaluating potential impacts associated with:
  - Mine construction and operation
  - Accidents and failures
- Intensive three-year assessment effort
  - Independent external peer review
  - Stakeholder and public engagement
    - 8 public meetings
    - 2 rounds of public comment – over 1.1 million comm
  - Tribal consultation



Bristol Bay Assessment

- Fishery resources:
  - Bristol Bay produces almost half of world's sockeye salmon
  - Kvichak watershed world's largest producer of sockeye salmon
  - Nushagak watershed frequently at or near world's largest producer of Chinook salmon
- Fishery supports:
  - 14,000 jobs, generates $480 million in direct economic expenditures and sales
  - 4,000-year-old subsistence fishery for Alaska Natives

Figure ES-3. Total sockeye salmon run sizes by (A) region and (B) watersheds within the Bristol Bay region (as defined in Chapter 2 of the assessment). Values are averages from 1956-2005 and 1956-2010 for A and B respectively (see Appendix A, Tables A2 and A3).



Bristol Bay Assessment

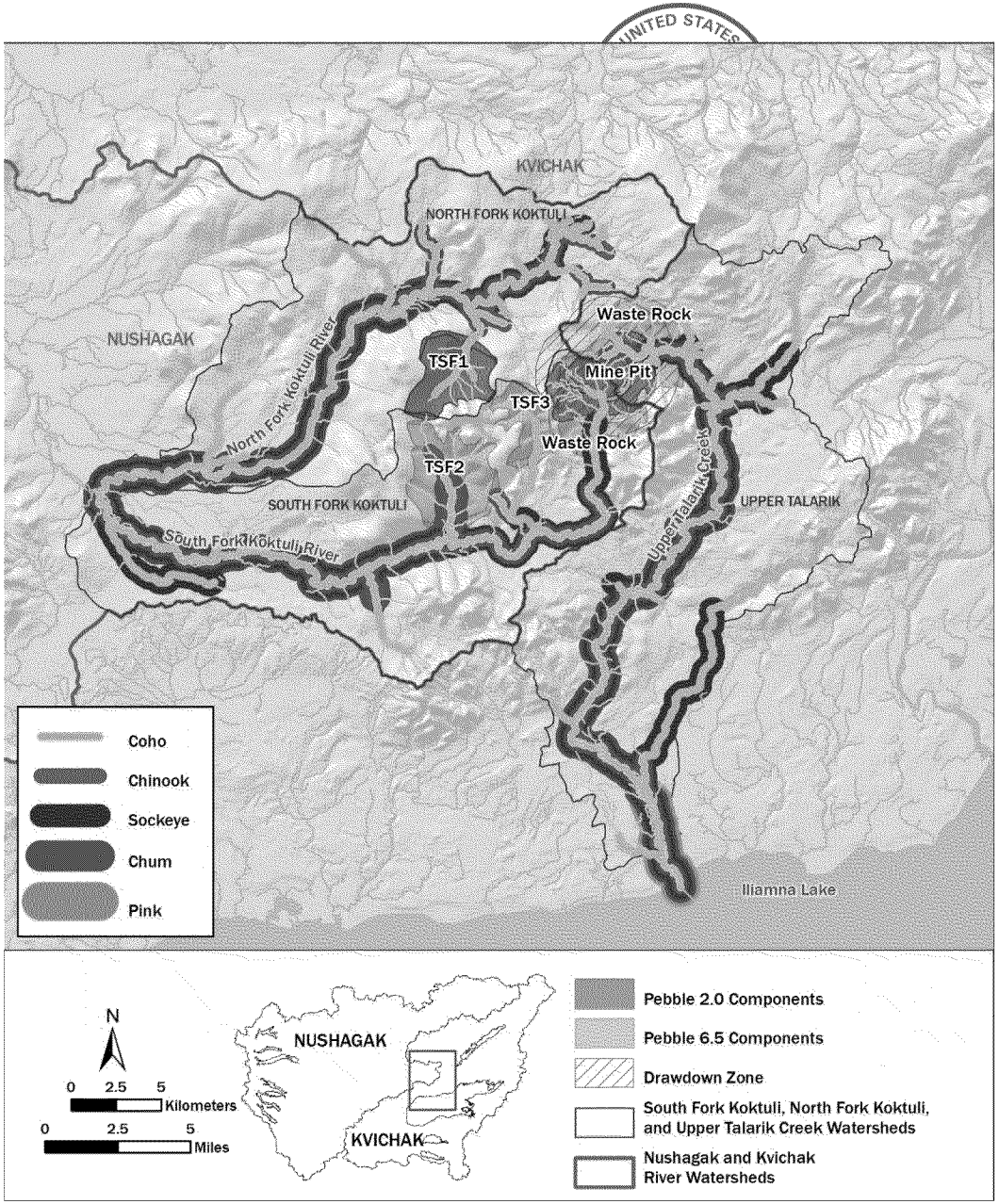
- Mining scenarios informed by NDM plans submitted to U.S. Securities and Exchange Commission (SEC) in 2011
- Uses 3 potential stages of mine development at Pebble deposit
  - 0.25-billion-ton mine (worldwide median size porphyry copper deposit)
  - 2.0-billion-ton mine (smallest mine size proposed by NDM to SEC)
  - 6.5-billion-ton mine (largest mine size proposed by NDM to SEC)
- NDM says deposit is nearly 12 billion tons

Bristol Bay Assessment: Mine Construction and Operation Impacts

Loss of 24 to 94 miles of salmon supporting streams (5 to 22 miles of which are documented salmon spawning and rearing habitat)

Loss of 1,200 to 4,900 acres of salmon supporting wetlands, ponds, and lakes

Streamflow alterations exceeding 20% would adversely affect salmon supporting habitat in an additional 9 to 33 miles of streams, downstream of the mine footprint



Clean Water Act Section 404

- 404(a) authorizes the Secretary of the Army to issue **permits**
  - For the discharge of dredged or fill material into waters of the U.S. at specified disposal sites

- Subject to subsection 404(c), 404(b) directs the Secretary of the Army to apply **environmental criteria** developed by EPA when specifying disposal sites
  - Section 404(b)(1) Guidelines [40 CFR Part 230]

- 404(c) authorizes EPA to **prohibit, deny or restrict (or withdraw)** the use of any defined area as a disposal site
  - Whenever it determines, after notice and opportunity for public hearings, that the discharge of "such materials into such area" will have an **unacceptable adverse impact** on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas.

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Final 404(c) Actions Since 1972

Year Finalized	COMPLETED 404(c) Actions	Resources Protected
2011	Spruce No.1 Surface Mine, WV	**6.6 miles** of high-quality headwater streams – some of the last remaining high-quality habitat in the Coal River basin
2008	Yazoo Backwater Pumps, MS	**67,000 acres** of highly productive wetlands in the Lower Mississippi Delta, including bottomland hardwood forests
1990	Two Forks Reservoir, CO	**30 miles** of South Platte River, including 14 miles of State Designated "Gold Medal" trout stream
1990	Big River Reservoir, RI	**575 acres** of exceptional and diverse natural wetlands with habitat for an assemblage of wildlife species
1989	Ware Creek Reservoir, VA	**425 acre** mosaic of high quality aquatic resources in Chesapeake Bay watershed including critical fish nurseries
1988	Lake Alma, GA	**1,000 acres** of bottomland hardwood wetlands providing important habitat for an assemblage of species
1988	Henry Rem Estates, FL	**432 acres** of Everglades wetlands with significant fish & wildlife habitat including potential Florida panther habitat
1988	Russo Development Corp., NJ	**57.5 acres** of wetlands within the Atlantic Flyway used by a multitude of State threatened and endangered species
1986	Attleboro Mall (Sweeden's Swamp), MA	**45 acres** of New England red maple forested swamp including high-quality habitat for a variety of wildlife
1985	Bayou aux Carpes (Creppel), LA	**3,000 acres** of essential wetlands including habitat for osprey and American alligator
1985	Jack Maybank, SC	**900 acres** of coastal intertidal marsh including valuable spawning and nursery grounds for blue crab and shrimp
1984	M.A. Norden Co., Inc., AL	**25 acres** of forested and emergent wetland - one of the last remaining wetlands in the Mobile area
1981	North Miami, FL	**103 acres** of wetlands and other aquatic resources including essential nursery grounds for marine fish and invertebrates

Pebble Deposit 404(c) Process

Step

Step

Step

Step

) by EPA Assistant Administrator for Water
• 7/ posed ion released (PD) by EPA Region 10
NDM/PLP, and State • 2/ ion ion 10 – “15-day letter”
jion 10 will prepare Recommended Determination (RD)
of RD, issue FD affirming, modifying, or rescinding RD P, and State
• Co od c 4

What Are the Proposed Restrictions?

Restrict the discharge of dredged or fill material related to mining the Pebble deposit into waters of the U.S. that would, individually or collectively, result in the following:

1. **Loss of Streams.**
   a. The loss of 5 or more linear miles of streams with documented anadromous fish occurrence; **or**
   b. The loss of 19 or more linear miles of streams where anadromous fish are not currently documented, but that are tributaries of streams with documented anadromous fish occurrence; **or**

2. **Loss of Wetlands, Lakes, and Ponds.** The loss of 1,100 or more acres of wetlands, lakes, and ponds contiguous with either streams with documented anadromous fish occurrence or tributaries of those streams; **or**

3. **Streamflow Alterations.** Streamflow alterations greater than 20% of daily flow in 9 or more linear miles of streams with documented anadromous fish occurrence

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Status

- 9/19/14: PD comment period closed, EPA Region 10 received approximately 670,000 written public comments and oral testimony from over 300 public hearing participants
  - Region 10 began reviewing comments to determine if it would withdraw the PD or recommend a determination under 404(c) to EPA HQ

- 11/25/14: Federal District Court Judge orders EPA to halt all work on its 404(c) review in *PLP vs. EPA,* until the judge rules on the merits of the case
  - The current preliminary injunction concerns the assertion that there were unauthorized "de facto" federal advisory committees providing advice to the Agency in violation of the Federal Advisory Committee Act (FACA), an assertion we vigorously contest

- 1/13/16: EPA OIG's 17-month in-depth evaluation of EPA Bristol Bay Assessment finds no evidence of bias, no evidence of pre-determined outcome, and all assessment policies and procedures appropriately followed

- The FACA case is currently stayed until 3/20/17 "*so that the parties may continue to pursue ways to resolve this case without the press of litigation, including through the continued exploration of mediation.*"