

What you should know about EPA's Proposed Determination

It's just one part of a longer process.

It offers a selective set of restrictions based around the Pebble deposit.

EPA needs public input.

The U.S. Environmental Protection Agency completed an assessment of the Bristol Bay watersheds in January 2014, and announced in February that it would begin a Section 404(c) process to protect the valuable salmon fishery in Bristol Bay "from the potentially destructive impacts of the proposed Pebble Mine."

The Proposed Determination is the first look at how the EPA intends to protect the fisheries. Some critics were concerned that the Agency would limit development outright. However, the document describes a more selective approach, with restrictions in a specific area around the Pebble deposit site.



The Proposed Determination is one step in a longer 404(c) process that usually takes about a year (see *our timeline on the back*).

After EPA reviews public response to its proposal, it may continue with a Recommended Determination and a possible Final Determination. It also may decide to withdraw the Determination at any time.

Photo: Cottongrass at the Pebble deposit site.

PROPOSED DETERMINATION

CHAPTER GUIDE

1 Introduction

An overview of the 404(c) process and what is included in the Proposed Determination. (3 pp)

2 Background and Project Description

Describes the history of land use planning in Bristol Bay, how EPA got involved, how the Watershed Assessment was developed, the launch of 404(c) action and a description of the Pebble project. (20 pp)

3 Importance of the Region's Ecological Resources

Describes the landscape, including aquatic habitats. Read here about streams and streamflow, fish resources and fisheries. Includes lots of maps illustrating which fish are found in which areas. (53 pp)

4 Basis for Proposed Determination

In this section, EPA states its case for applying restrictions in the development area; it includes the effects of construction/operation on the fishery, and on lost streams and their tributaries, and effectiveness of mitigation practices. (69 pp)

5 Proposed Restrictions

Lists the proposed restrictions and defines terms, including "loss," "contiguous" and "dewatering." (3 pp)

6 Other Considerations

EPA's current 404(c) action relates to adverse effects on the Bristol Bay fishery. This section discusses other potential Section 404(c) resources, such as wildlife, recreation and public water supply. It also addresses environmental justice, how mining impacts could affect subsistence and describes the consultation process with tribal governments. (11 pp)

7 Solicitation of Comments

EPA encourages public comment on the Proposed Determination and lists 11 questions of particular interest. (2 pp)

8 References

EPA has listed references for each section. Some have links you can use for further research. (32 pp)

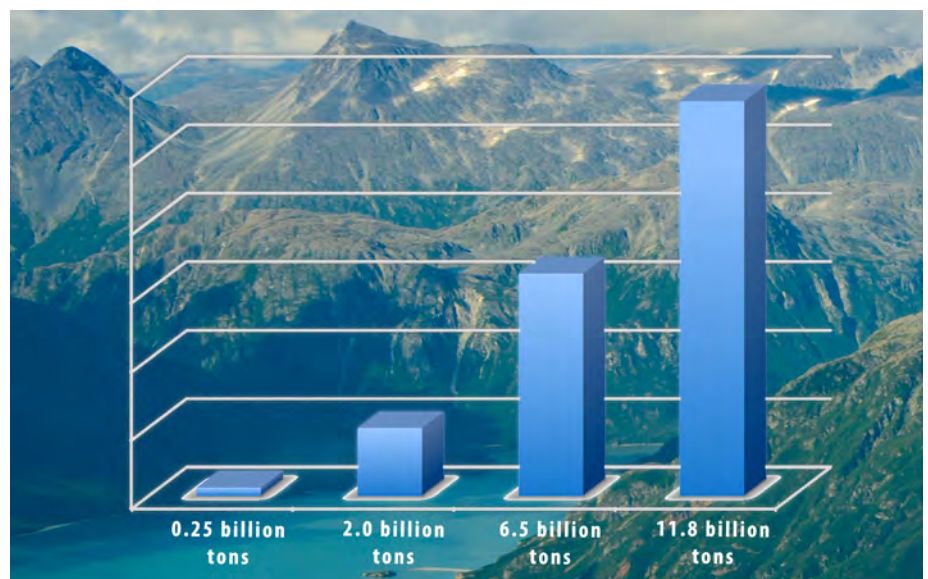
HIGHLIGHTS

EPA says developers were unable to prove that there would be no unacceptable effects. EPA asked Northern Dynasty Minerals (NDM), Pebble Limited Partnership (PLP) and the State of Alaska for information that could prove that no unacceptable effects would occur due to disposal of dredge or fill materials associated with mining the deposit. They submitted information, but it did not convince the EPA. Later in the 404(c) process, they will have another opportunity to explain corrective action they would take to avoid unacceptable effects.

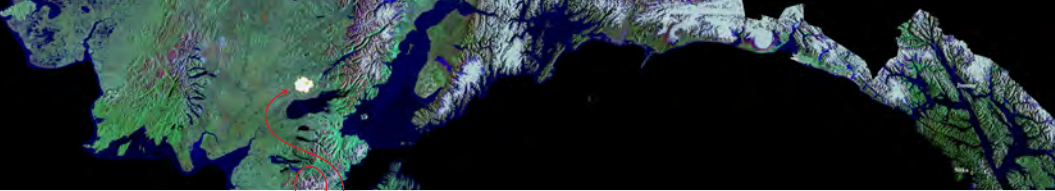
EPA says proposed mitigation plans are not adequate. According to EPA, compensatory mitigation efforts proposed by PLP – including stream fertilization and building spawning channels – have not typically been effective in the long term and are unlikely to offset adverse impacts.

EPA underestimates potential impact. The Pebble deposit is one of the largest undeveloped copper-gold-molybdenum mines in the world, with estimates of up to 11.8 billion tons of Measured, Indicated and Inferred mineral resources. In its Bristol Bay Watershed Assessment, EPA evaluated the potential adverse effects of developing three different sizes of mines at the Pebble deposit. The scenarios were based largely on an NDM investor report that detailed an investment case for a 25-year, 45-year and 78-year mine. (In that report, NDM stated that it expected to process just over half of Pebble's mineral resources in eight decades.)

EPA's Proposed Determination focused on possible negative effects of dredge/fill disposal for a smaller mine that would extract much less mineral (0.25 billion tons) over a shorter period of time (20 years.) In its analysis, EPA found that there would be unacceptable adverse effects even in a mine of this size. EPA notes that additional adverse impacts could be expected to occur with a mine of longer life, and also are likely due to accidents.



Visual comparison of a 0.25 billion-ton mine (what EPA analyzed in the Proposed Determination) and an 11.8 billion-ton mine (the estimated mineral resource at the Pebble deposit). The 2.0 billion-ton and 6.5 billion-ton examples are also referenced in EPA's Proposed Determination and its Watershed Assessment.



DISPOSAL SITE

In the Proposed Determination, EPA includes a map of Bristol Bay with a clearly defined area called the “Disposal Site.” (*White area in map above*) EPA’s proposed restrictions, if enacted, would be valid within the area of the mapped Disposal Site. The 268-square-mile area generally encompasses the waters within the mine claims held by NDM subsidiaries, including PLP, that fall within the watersheds of the South Fork Koktuli and North Fork Koktuli rivers, and the Upper Talarik Creek.

Size of Municipality of Anchorage:

1,961 square miles

Size of Proposed Disposal Site:

268 square miles

RESTRICTIONS

EPA has provided specific numbers in its proposed restrictions, relating to stream loss and alteration, and loss of wetlands, lakes and ponds. Any discharge of dredge/fill in the Disposal Site that would lead to the following would be prohibited:

- Loss of five miles or more of salmon streams (or loss of 19 or more miles of streams that are tributaries of salmon streams).
- Loss of 1,100 or more acres of wetlands, lakes and ponds that connect with salmon streams or tributaries of those streams.
- Alterations greater than 20 percent of daily flow in nine or more linear miles of salmon streams.

Restrictions refer to the five species of anadromous salmon present in Bristol Bay waters: Coho/Silver, Chinook/King, Red/Sockeye, Chum/Dog, Pink/Humpy.

If these restrictions are approved, only a mine plan that meets them can move on to permitting.

TERMINOLOGY

Sometimes terminology used in official documents could use a little more explanation. Here’s our short-take on some of the words and phrases you’ll find in EPA’s document.

Section 404 – Part of the Clean Water Act; regulates dredge and fill materials entering wetlands, streams or other waters. Under Section 404, the U.S. Army Corps of Engineers issues permits for activities that would place fill in wetlands. The permitting process, overseen by EPA, requires that projects show they can take appropriate steps to avoid, minimize, and offset adverse impacts.

Dredge & Fill – Excavation in wetlands or other surface waters; depositing material (such as earth, clay, gravel, rock) in wetlands or other surface waters.

Streamflow alterations – Changes to how water flows in a stream (how much, how often, etc.) is called “streamflow alteration.” Streamflow is recognized as critical to habitat and species diversity. The U.S. Geographical Survey (USGS) studies streamflow in many locations in the U.S., and notes that changes in streamflow are a “primary contributor to degraded river ecosystems” and can lead to the loss of fish and invertebrate species.



