

April 26, 2013

President Barack Obama
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear Mr. President:

As scientists with backgrounds in ecology and other natural resource-related disciplines, we are writing to express our deep concerns with the prospect of large-scale mining in the unique and biologically rich Bristol Bay watershed of Southwest Alaska.

We also write to thank the Environmental Protection Agency (EPA) for preparing a comprehensive assessment of the potential impacts to fisheries, wildlife and native cultures from large-scale gold and copper mining, such as may be proposed at the Pebble Mine. This approach of reviewing the assets and vulnerabilities of a valuable and high-functioning ecosystem and considering up front a range of possible mining scenarios should help the agency make sound policy recommendations.

The watershed assessment is particularly important for protecting a region in which a healthy and diverse fish population is central to the wellbeing of people, other wildlife, the economy and a subsistence way of life that dates back thousands of years. The agency is to be commended for initiating this effort rather than waiting to rely on the narrow scope of review that might be taken when a single permit application is filed.

In our view, EPA's draft *Bristol Bay Watershed Assessment* aptly identifies the outstanding ecological and cultural values at risk from a mine on the scale of the Pebble discovery or from other mine operations that would likely follow an initial mine opening in the region. The Bristol Bay area, comprised of the Nushagak and Kvichak river watersheds, the headwaters of three other pristine rivers, and the largest undeveloped lake on Earth, is one of the most productive, beautiful, and bountiful landscapes on the continent. Undeveloped watersheds are a rarity throughout the world and Bristol Bay's pristine watersheds support a world-class salmon fishery, which includes all five salmon species native to Alaska and the largest sockeye salmon runs in the world. Annual salmon returns, fully unsupported by hatcheries, typically average in the millions. The Bristol Bay Sport Management Area also supports abundant sport and subsistence fisheries. Together, this keystone fishery and the diverse habitats of the region are home to abundant populations of brown bears, gray wolves, and bald eagles. Caribou and moose frequent the areas' wetlands.

We believe that the geographic scope of the assessment is appropriate not only because the Kvichak and Nushagak basins include roughly half of the total land area that drains to the Bay, but also because there are currently mine leases on more than half a million acres in these highly productive basins. In addition, the metal-bearing waste produced by a single mine could, as EPA notes, run upwards of seven billion tons, or as other scientists have estimated, even

exceed ten billion tons¹. The need to manage and permanently contain a volume of mine tailings even close to these numbers in a harsh yet vulnerable environment would be an enormous challenge.

We would also note that the mine impact scenarios used to estimate risks to fisheries, though based on an industry report for the Pebble prospect,² may actually be overly optimistic about such challenges and about the overall management of a large mine. This is particularly important given the sensitivity of aquatic life to very low levels of metals and the potential for effects that could result in a long-term decline of fish populations. In addition, it appears that true cumulative impacts were underestimated, as the project scope was limited and did not include full impacts related to power, port, transportation, and additional human infrastructure development that would likely occur.

We understand that no specific mining proposal has yet been put forward for approval and that the agency has been criticized for utilizing hypothetical mine scenarios for assessment of impacts. We disagree strongly with these criticisms and believe that the use of credible mining scenarios is appropriate for this sort of forward-looking analysis. We would also note that the nature of metal mining, with its high potential for encountering unanticipated conditions, means that nearly any major mine plan is subject to change. Indeed, the footprints of many mines that have operated over decades are far larger than initially planned.

Again, we applaud EPA for its effort to establish a solid science-based summary from which to evaluate likely impacts to Bristol Bay from large-scale mine development. We believe that the preponderance of evidence shows clearly that gold and copper mining in the Bristol Bay watershed threatens a world-class fishery and uniquely rich ecosystem, and we urge the Administration to act quickly to protect the area.

Sincerely,

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¹ Ghaffari, H., R. S. Morrison, M. A. Deruijeter, A. Živković, T. Hantelmann, D. Ramsey, and S. Cowie. 2011. Preliminary assessment of the Pebble Project, Southwest Alaska. Wardrop, Vancouver, BC.

² *Ibid.*

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