

CWA Section 404(c) Final Determination for the Pebble Deposit Area of the Bristol Bay Watershed January 2023

The U.S. Environmental Protection Agency is limiting the use of certain waters in the Bristol Bay watershed as disposal sites for certain discharges of dredged or fill material associated with development of a mine at the Pebble deposit, a large ore body in southwest Alaska.

After extensive review of scientific and technical research spanning two decades, and robust stakeholder engagement, EPA has determined that certain discharges associated with developing the Pebble deposit will have unacceptable adverse effects on certain salmon fishery areas in the Bristol Bay watershed. This Final Determination is exercising EPA's authority under Section 404(c) of the Clean Water Act¹ (CWA). In the 50-year history of the CWA, EPA has used its Section 404(c) authority judiciously. This action marks the third time in 30 years, and only the fourteenth time in the history of the CWA, that EPA has used this authority. This action does not apply to any other resource development projects in the State of Alaska.

The Bristol Bay Watershed—A Critical Resource

Alaska's Bristol Bay watershed, home to 25 Alaska Native villages and communities, is an area of unparalleled ecological value, with salmon diversity and productivity unrivaled anywhere in North America. The region provides high-quality, diverse, and connected aquatic habitats, from headwaters to ocean, that support abundant, genetically diverse wild Pacific salmon populations. These salmon populations have supported Alaska Native cultures for thousands of years and continue to support one of the last intact salmon-based cultures in the world. The Bristol Bay watershed produces approximately half of the world's Sockeye Salmon, and salmon fisheries are a huge economic driver in the region, supporting approximately 15,000 jobs annually and generating an estimated \$2.2 billion in 2019 alone. These salmon populations also help to maintain the productivity of the entire ecosystem, including numerous other fish and wildlife species. Together, the Bristol Bay watershed's diverse and largely undisturbed aquatic habitats and productive salmon populations form the foundation of this globally significant ecological and cultural resource.

Pebble Mine

The Pebble deposit, a large, low-grade deposit containing copper-, gold-, and molybdenum-bearing minerals, is located at the headwaters of the pristine Bristol Bay watershed. The Pebble deposit underlies portions of the South Fork Koktuli River (SFK), North Fork Koktuli River (NFK), and Upper Talarik Creek (UTC) watersheds, which drain to two of the largest rivers in the Bristol Bay watershed, the Nushagak and Kvichak Rivers.

Development of a mine at the Pebble deposit has been the subject of study for nearly two decades. EPA's Final Determination is based on this extensive record of scientific and technical information and applies only to certain discharges of dredged or fill material associated with developing the Pebble deposit.

¹ Section 404(c) of the CWA authorizes the EPA: to (1) prohibit or withdraw the specification of any defined area as a disposal site, and (2) deny, restrict, or withdraw the use of any defined area for specification as a disposal site, whenever it determines, after notice and opportunity for public hearings, that the discharge of dredged or fill material into the area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas.

EPA's Final Determination

EPA has determined that the large-scale loss of, and damage to, headwater streams, wetlands, and other aquatic resources that support salmon populations in the SFK, NFK, and UTC watersheds from the discharge of dredged or fill material for the construction and routine operation of the 2020 Mine Plan described in Pebble Limited Partnership's June 8, 2020 CWA Section 404 permit application, as well as future proposals that would have the same, similar, or greater levels of aquatic resource loss or damage will have unacceptable adverse effects on anadromous² fishery areas in these watersheds.

Discharges of dredged or fill material to construct and operate the proposed mine site alone would result in the permanent loss of approximately 8.5 miles (13.7 km) of anadromous fish streams, 91 miles (147 km) of additional streams that support anadromous fish streams, and approximately 2,108 acres (8.5 km²) of wetlands and other waters in the SFK and NFK watersheds that support anadromous fish streams. These discharges would also result in streamflow alterations that would adversely affect approximately 29 miles (46.7 km) of additional anadromous fish streams downstream of the mine site due to greater than 20 percent changes in average monthly streamflow. The aquatic resources that would be lost or damaged play an important role in supporting salmon populations in the SFK, NFK, and UTC watersheds.

EPA's Final Determination specifically:

- **Prohibits** the specification of certain waters of the United States in the SFK and NFK watersheds as disposal sites for the discharge of dredged or fill material for the construction and routine operation of the 2020 Mine Plan. This includes future proposals to construct and operate a mine to develop the Pebble deposit with discharges of dredged or fill material into waters of the United States anywhere at the mine site that would result in the same or greater levels of aquatic resource loss or streamflow changes as the 2020 Mine Plan; and
- **Restricts** the use for specification of certain waters of the United States in the SFK, NFK, and UTC watersheds as disposal sites for the discharge of dredged or fill material associated with future proposals to construct and operate a mine to develop the Pebble deposit with discharges of dredged or fill material into waters of the United States that would result in adverse effects similar or greater in nature and magnitude to the adverse effects of the 2020 Mine Plan.

Why This Action Matters

By prohibiting and restricting the discharge of dredged or fill materials associated with developing the Pebble deposit in certain areas of the Bristol Bay watershed, EPA prevents unacceptable adverse effects on important wild salmon habitat, and in doing so also helps safeguard the critical Bristol Bay ecosystem. The region's salmon resources have supported Alaska Native cultures for thousands of years and continue to support one of the last intact salmon-based cultures in the world. Together, the Bristol Bay watershed's largely undisturbed aquatic habitats and productive salmon populations create this globally significant ecological and cultural resource. The streams, wetlands, and other aquatic resources of the Bristol Bay watershed also provide the foundation for world-class, economically important, commercial and sport fisheries for salmon and other fishes.

² Anadromous fishes hatch in freshwater habitats, migrate to sea for a period of relatively rapid growth, and then return to freshwater habitats to spawn. For the purposes of this Final Determination, "anadromous fishes" refers only to Coho or Silver salmon (*Oncorhynchus kisutch*), Chinook or King salmon (*O. tshawytscha*), Sockeye or Red salmon (*O. nerka*), Chum or Dog salmon (*O. keta*), and Pink or Humpback salmon (*O. gorbuscha*).