



American Fisheries Society

Western Division

President Scott Bonar, President-elect Leanne Roulson, Vice-president Lori Martin, Secretary-Treasurer Dave Ward, Past-president Eric Wagner

RESOLUTION OF THE WESTERN DIVISION OF THE AMERICAN FISHERIES SOCIETY (WDAFS)

ANNUAL MEETING: ALBUQUERQUE, NEW MEXICO, 3-7 MAY 2009

RECOMMENDING A FORMAL INDEPENDENT SCIENTIFIC REVIEW OF POTENTIAL ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES OF LARGE-SCALE MINERAL EXTRACTION IN THE BRISTOL BAY WATERSHED

WHEREAS the mission of the American Fisheries Society, the oldest and largest professional society representing fisheries scientists and managers, is to improve the conservation and sustainability of fisheries resources and aquatic ecosystems by advancing fisheries and aquatic science;

WHEREAS, Alaska clearly needs to use both renewable and nonrenewable resource development for economic support; and

WHEREAS revenue derived from responsible use of fish, oil, mineral, and timber resources provides employment and an improved quality of life for many Alaskans; and

WHEREAS the Constitution of the State of Alaska requires the legislature to provide for use, development, and conservation of all State-owned natural resources for the peoples' maximum benefit; and requires that renewable resources such as fish, forests, and game belonging to the State be developed and managed sustainably; and

WHEREAS the Pebble claim in the Bristol Bay watershed is part of a massive low grade porphyry copper sulfide deposit estimated to contain about 94,000,000 ounces of gold, 72,000,000,000 pounds of copper, and 48,000,000,000 pounds of molybdenum, the development of which may require: an open pit mine (~2 mi long X ~1.5 mi wide X ~1,600 ft deep); an underground mine; a ~ 100 mi long road; and an estimated 35 billion gallons of water annually; and

WHEREAS the region that contains the Pebble copper deposit has porous alluvial soils; abundant ground and surface water; interconnected watersheds; undefined seismic faults;

significant seismic activity; is not well buffered and contains a high proportion of acid-generating sulfides; and

WHEREAS slight increases in dissolved copper concentrations in water as low as 2-10 ug/L above background can alter the olfactory-mediated survival and migration of salmonids; and

WHEREAS Bristol Bay is home to the world's largest wild sockeye salmon fisheries; and also sustains healthy productive fisheries on other salmonids and herring; the seafood industry there employs about 10,000 people annually; gross earnings reported in 2007 were over 100 million; and

WHEREAS the rivers and groundwater draining the Pebble copper deposit are essential to spawning, incubating, rearing and migrating salmon and non-salmon fishes and drain into waters supporting diverse Bristol Bay fisheries; and

WHEREAS Alaska Native peoples have relied on annual salmon returns to the rivers draining the Pebble copper deposit for subsistence for thousands of years and today salmon still comprise 60% to 80% of their total subsistence harvest which in 2006 was over 90,000 salmon for the Nushagak and Kvichak drainages; and

WHEREAS the Nushagak and Kvichak River drainages containing the Pebble copper deposit have produced about 50% of all commercially harvested sockeye salmon from Bristol Bay for 125 years; and

WHEREAS said river corridors have been closed to mining entry for nearly 25 years; and

WHEREAS a 2007 study of sportfishing economic impacts by the Alaska government indicated expenditures to be \$1.4 billion dollars generating 15,879 jobs; of which, \$989 million and over 11,000 jobs were attributed to the Southcentral region which includes Bristol Bay; and

WHEREAS the Alaska Department of Fish & Game estimates the Bristol Bay exvessel commercial salmon fishery as having an average annual value of \$65 million; and

WHEREAS the Pebble copper deposit straddles both the Nushagak and Kvichak drainages, is adjacent to Lake Clark National Park and Preserve, is about 15 miles upgradient of Lake Iliamna where millions of sockeye fry rear annually, and is in headwaters of the Nushagak, a major Chinook salmon producer; and

WHEREAS open pit mining requires rigorous scientific studies for design, execution, and mitigation of environmental impacts; including careful consideration of potential negative environmental consequences, including effects on water quantity, quality, and fishery resources; and

WHEREAS: the U.S. Environmental Protection Agency estimates that there are 500,000 abandoned mines in the U.S. and that 40% of western headwater streams are polluted from mining; clean up costs are estimated to be from \$32 - 72 billion; many mines slated for clean-up require long-term or perpetual water treatment; and such extensive ongoing water contamination threatens both the Nation's drinking water supplies and valuable fisheries resources; and

WHEREAS the debate over the development of the Pebble copper deposit in the headwaters of Bristol Bay pits two of Alaska's most important industries against each other with each side claiming science will support its case; and

WHEREAS the U.S. Environmental Protection Agency has developed and implemented a statistically and ecologically rigorous environmental monitoring and assessment program for the inland waters of the U.S.; and

WHEREAS the states of Oregon, Idaho, and California have used intensified versions of the U.S. Environmental Protection Agency protocol to assess status and trends in salmon and trout populations and aquatic biological condition, respectively; and

WHEREAS it is important that the Alaska Legislature, and State and Federal Resource managers have the best possible information with which to base policy decisions regarding the potential for development of the Pebble copper deposit, together with the potential environmental consequences of that development;

NOW, THEREFORE, BE IT RESOLVED that the WDAFS recommends application of carefully designed, robust, and statistically defensible sampling be conducted relative to both surface and groundwater quality and quantity for consideration in applicable regulatory processes including the National Environmental Policy Act (NEPA) process; that careful attention be afforded to the design of a long term monitoring program for waters draining the prospect; that control sites should be included to enable long-term monitoring for change resulting from mine development with particular emphasis on water budgets and water quality, and secondarily on fishery resources; and

BE IT FURTHER RESOLVED that the WDAFS recommends that results of all scientific studies in support of the Pebble copper prospect be provided in the form of standard scientific technical reports to the public and resource managers for review via an Internet web site; and

BE IT FURTHER RESOLVED that the WDAFS recommends an independent, interdisciplinary assessment of the known and probable cumulative environmental and socioeconomic consequences of development of the Pebble copper deposit with a focus on hydrological systems, water budgets, water quality; fishery resources; and major data gaps in the preceding information; and such assessment include all infrastructure necessary to implement the project.

BE IT FURTHER RESOLVED that this resolution be sent by the WDAFS to relevant decision makers and regulatory agencies including, but not limited to, the following:

1) Alaska Legislative Council
716 W 4th Avenue #200
Anchorage, AK 99501

2) Sarah Palin, Governor
State of Alaska
Box 110001
Juneau, AK 99811-0001

3) Lisa Jackson, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460
jackson.lisa@epa.gov

4) Jane Lubchenco, Administrator
National Oceanic & Atmospheric Administration
1401 Constitution Avenue, NW
Washington, DC 20230
jane.lubchenco@noaa.gov

5) Mike Pool, Acting Director
Bureau of Land Management
1849 C Street NW, Room 5665
Washington, DC 20240
Mike_pool@blm.gov

6) E. William Colglazier, Executive Officer
National Research Council
500 Fifth Street NW
Washington, DC 20001
ecolglazier@nas.edu