



# American Fisheries Society

## *Western Division*

President Pam Sponholtz, President-elect Hilda Sexauer, Vice-president Jim Bowker, Secretary-Treasurer Travis Neebling, Past-president Christina Swanson

January 27, 2014

Gina McCarthy, Administrator  
Environmental Protection Agency  
William Jefferson Clinton Building  
1200 Pennsylvania Avenue, N.W., 1101A  
Washington, DC 20460

Dear Administrator McCarthy,

The Western Division of the American Fisheries Society (WDAFS)<sup>1</sup> represents scientists and natural resource managers from the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming; U.S. associated entities in the West Pacific Ocean; the Province of British Columbia and the Yukon Territory in Canada; and Mexico. Our mission is to advance sound science, promote professional development and disseminate science-based fisheries information for the global protection, conservation and sustainability of fisheries resources and aquatic ecosystems. Our members, some 3,000 strong, represent a tremendous array of fisheries experts involved in all aspects of the fisheries profession and employed in academia, government agencies, non-governmental organizations, and private consulting.

At our annual conference in 2010, WDAFS membership recognized the potential impact of large-scale mining operations on the valuable and irreplaceable aquatic ecosystems and fish populations in the Bristol Bay watershed. The membership voted to approve a resolution that included a call for a comprehensive watershed assessment and review of the available scientific information before any mining operations were initiated. Therefore, we were pleased to learn that the U.S. Environmental Protection Agency (EPA) had launched such an effort that year and, subsequently, to review and comment on the April 2013 *Draft Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska*.<sup>2</sup>

We have now reviewed the final Watershed Assessment, released on January 15, 2014, and are writing to express our appreciation for this important work.

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<sup>1</sup> More information on the Western Division of the American Fisheries Society is available at:  
<http://wdafs.org/about-us/>.

<sup>2</sup> The WDAFS resolution and our comments on the 2013 draft assessment are available at:  
<http://wdafs.org/meetings/archives/resolutions/>

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First, we are deeply appreciative of the careful, rigorous and transparent process—which exceeded academic and industry standards—that EPA used to develop the Watershed Assessment. The multi-disciplinary analysis by mining engineers, salmon biologists, aquatic ecologists, aquatic toxicologists, hydrologists, wildlife ecologists and experts on native Alaskan culture; two rounds of independent review by a panel of 12 more scientists; public meetings and consideration of more than 1.1 million public comments; and the complete transparency of responses to comments from the independent peer review panel, mine-proponents Northern Dynasty Minerals and the public: all contributed to produce a comprehensive, clear and highly credible document and resource for planning and decision-making.

Second, the Watershed Assessment’s findings are comprehensive, clear and, in our view, conservative about potential impacts of large-scale mining in the Bristol Bay watershed. From our review, the analysis yielded four key conclusions:

- The aquatic ecosystems and fisheries of the Bristol Bay watershed are an irreplaceable resource of global significance. In its current state, the Bristol Bay watershed is a biodiverse ecological resource, a healthy, sustainable commercial and recreational fishery resource, a valuable economic resource and an enduring cultural resource.
- Development and operation of large-scale mining in the watershed’s headwaters will destroy or degrade streams and wetlands, pollute the pristine waters, create massive amounts of toxic waste, and put the salmon fishery and Alaskans who depend on it at “significant risk.” Because of the mine’s proposed location in the watershed’s headwaters and the high degree of interconnections between surface and groundwater in the region, these impacts will extend downstream and far beyond the footprint of the mine itself. Any failure of the dams holding the toxic mine tailings would be “catastrophically damaging” to the ecosystem and fisheries.
- Damage from a large-scale mine is unavoidable and permanent. It cannot be eliminated even with the best mine design and perfect operations, it cannot be remediated by restoring habitat after the mine plays out, and it cannot be mitigated by creating compensatory salmon habitat elsewhere.
- Toxic waste generated by mining operations and the massive dams built to confine it will have to be monitored, managed and maintained to prevent leaks and catastrophic spills in perpetuity, long after mining operations are concluded.

Finally, and as intended, the Watershed Assessment provides the information needed to make an informed choice about whether or not to allow large-scale mining in the Bristol Bay watershed. Based on our review of the Watershed Assessment, as well as the American Fisheries Society’s own published recommendations for policy changes to mining law and regulations,<sup>3</sup> we strongly

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<sup>3</sup> In 2012, the American Fisheries Society’s journal, *Fisheries*, reported on a 2011 AFS symposium on *Fisheries and Hard Rock Mining* and published recommendations for policy changes to mining law and regulations.<sup>3</sup> Key among them were recommendations to:

- Designate sensitive lands and waters as off limits to hard rock exploration and development;
- Prohibit mines likely to result in perpetual water pollution and/or requiring perpetual water treatment; and
- Prohibit mine discharges to surface or ground waters that degrade water quality.

A description of the symposium, sponsored by Trout Unlimited, the Pebble Limited partnership, and the AFS Water Quality Section, and our recommendations were published in *Fisheries* Vol. 37, No. 2 and are available at: [http://www.pebblescience.org/pdfs/O'Neal\\_Hughes\\_2012.pdf](http://www.pebblescience.org/pdfs/O'Neal_Hughes_2012.pdf). The entire issue of *Fisheries* is available at: [http://fisheries.org/docs/fisheries\\_magazine\\_archive/fisheries\\_3702.pdf](http://fisheries.org/docs/fisheries_magazine_archive/fisheries_3702.pdf).

recommend that the EPA use its authority under section 404(c) of the Clean Water act to prevent destruction of water, fisheries and recreational resources by denying use of this area for large scale mining.

If blanket denial is not an option, for future decision making it is important to evaluate permits in consideration of the large-scale, irreversible changes any large-scale mining operation will have on the resources. The magnitude of potential impacts identified in the draft assessment should require from any project applicant a high level of scientific and technological evidence that damage will not occur from their proposed project. For any permitting, the applicant should address each parameter identified in this report, including those not modeled in the risk assessment.

WDAFS also asks that the EPA initiate a carefully designed, robust, and statistically defensible sampling program to be conducted relative to both surface and groundwater quality and quantity, with attention to the design of a long term monitoring program for waters draining into Bristol Bay. This will be important information in any regulatory process.

The WDAFS applauds the effort, rigor and transparency with which EPA has conducted this watershed assessment and we appreciate the opportunities we had to provide our review and comments. Please contact me with any questions; we can provide additional information if so desired.

Sincerely,

*Pamela Sponholtz*

Pamela Sponholtz  
President

cc: Members, WDAFS Executive Committee, AFS Governing Board