



April 8, 2015

Testimony before the Senate Committee on Environment and Public Works Subcommittee on Fisheries, Water and Wildlife; Fairbanks Field Hearing

RE: IMPACTS OF THE PROPOSED WATERS OF THE UNITED STATES RULE ON STATE AND LOCAL GOVERNMENTS AND STAKEHOLDERS

Chairman Sullivan:

My name is Sue Mauger. I am the Science Director for Cook Inletkeeper, which is a community based non-profit organization, started in 1995 and dedicated to protecting clean water and healthy salmon for Alaskans. Please accept this testimony on behalf of Cook Inletkeeper's staff, Board of Directors and more than 2,000 members and supporters across Southcentral Alaska.

My comments and support for clarifying protections for wetlands and headwater streams under the Clean Water Act are based on my experiences working in Alaska's freshwater systems for the last 15 years. Recently my work has involved using thermal infrared technology to identify and map shallow groundwater connections that provide key sources of cold water in the summer as well as warm water for juvenile salmon in the winter. Exploring these complex surface and sub-surface connections reinforces to me that in Alaska, as in the rest of the United States, protecting tributaries and adjacent wetlands is important for protecting the integrity of downstream waters.

In my opinion, the impact of the proposed rule will be decidedly positive for Alaskans and I'd like to share with you three reasons why.

**1. Alaskans rely on wild salmon and other cold water fish for economic, cultural, and nutritional health.**

Presently Alaska's freshwater habitats are largely intact and support some of the most robust wild salmon populations in the world.<sup>i</sup> This is in part due to the extensively connected systems of small headwater streams and supporting wetlands. State biologists on the Kenai Peninsula are doing exciting research which shows how broader landscapes are linked to stream productivity and juvenile salmon densities. Through the delivery of alder-derived nitrogen and peatland-derived carbon, whole-ecosystem responses are generated which underscores the importance of landscape connectivity.<sup>ii,iii,iv,v</sup> This makes me think of wetlands functioning like a coffee filter. Just as my morning cup of caffeine helps bring me to life, rich nutrient laden water percolating out of saturated wetlands helps drive stream productivity.

The investment of nutrients from the landscape into the smallest of our streams pays off huge dividends in the form of vibrant fisheries. Salmon are economically the most important renewable resource throughout Alaska—annually supporting commercial, recreational, subsistence, and personal use fisheries worth billions of dollars. The Alaska Department of Fish and Game estimated that in 2007 sport fishing alone was responsible for \$1.6 billion in economic output, \$545 million in regional income, and over 15,000 jobs.<sup>vi</sup> The economic impact of the Bristol Bay Commercial Salmon Industry in 2010 included an estimated \$1.5 billion in output, \$500 million in income and about 9,800 jobs.<sup>vii</sup>

Another reason salmon thrive on our landscape is because of the sponge-like behavior of wetlands. And this becomes increasingly important during snow-less winters like the last 2 years. Presently the Kenai Peninsula's snowpack is 15% of normal. Fairbanks has fared better with 65% of normal snowpack.<sup>viii</sup> You can think of snowpack as stored summer stream flow. The snow in our hills during the winter feeds our streams all summer long. With little snow, water levels this summer will likely be low, resulting in fish passage issues for spawning salmon as they move into smaller creeks and warmer water temperatures increasing physiological stress. Climate models point to this becoming a more typical pattern for us. As we lose snow storage, wetland storage will be even more critical for the health of our cold water fish and fisheries. The proposed rule will protect these key water storage and coffee filter-like areas that are so important for salmon.

## **2. Alaskans rely on wetlands to reduce flood peaks which put our heavily-subsidized transportation infrastructure at risk.**

Fall storms are hard on our roads and bridges. I remember well the devastating floods of 2002 when sections of the Sterling Highway blew out leaving the lower Kenai Peninsula cut off for days. We had two, 100-year flood events within a month of each other. Poorly-placed and inadequately-sized culverts in the upper watersheds failed which resulted in pulses of debris torrents causing extensive damage to roads, bridges and property downstream. 2012 storms did similar damage to the Glenn Highway in the Mat-Su Basin. Fall storms will continue; however, a decrease in wetland cover can greatly increase peak flows and increase downstream flood damage. In FY2015, the federal budget covers approximately 90% (over \$1 billion) of Alaska's road costs.<sup>ix</sup> It hardly seems like federal overreach for the EPA to implement a rule which will reduce flooding potential by keeping wetlands intact when the federal budget is footing the bills to fix flood damage.

## **3. Alaskans rely on groundwater sources of drinking water.**

Across our rural landscape, the majority of Alaskans have private wells or use surface springs for drinking water. Our wetland-dominated landscape makes this possible by consistently recharging our aquifers. Most wells used to supply water to individual homes yield water from shallow aquifers which were recharged within the last 25 years.<sup>x</sup> Shallow aquifers contain groundwater that is primarily from the infiltration of local precipitation and water from streams, lakes and wetlands, and are susceptible to contamination. Keeping potential contaminants away from these water sources is by far less expensive than trying to remove contaminants from groundwater. The proposed rule, by protecting all of these water sources, would reinstate Alaskans' confidence that their drinking water is safe for their families.

One argument that some have made to delay or significantly alter the proposed rule is that Alaska's hydrologic circumstances are unique. I couldn't agree more with that observation. Alaska's freshwater situation is unique - uniquely intact and connected – rare circumstances for the lower 48. But with the current uncertainty of what constitutes the waters of the United States, Alaskans' clean water and healthy salmon are at risk of a death by a thousand cuts. Congress ought to move forward now with the protections provided by the proposed rule. Alaskans will be better off for it.

Thank you for the invitation to provide input on this important issue.

Sincerely,



Sue Mauger

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- <sup>i</sup> Augerot, X., and C.L. Smith (2010) Comparative resilience in five North Pacific regional salmon fisheries. *Ecology and Society* 15: 3. <http://www.ecologyandsociety.org/vol15/iss2/art3>
- <sup>ii</sup> King, R.S., C.M. Walker, D.F. Whigham, S.J. Baird, and J.A. Back (2012) Catchment topography and wetland geomorphology drive macroinvertebrate structure and juvenile salmonid in south-central Alaska headwater streams. *Freshwater Science* 31(2):341–364.
- <sup>iii</sup> Shaftel, R.S., R.S. King, and J.A. Back (2012) Alder cover drives nitrogen availability in Kenai Lowland headwater streams, Alaska. *Biogeochemistry* 107:135–148.
- <sup>iv</sup> Walker, C.W., R.S. King, D.F. Whigham, and S.J. Baird (2012) Landscape and wetland influences on headwater stream chemistry in the Kenai Lowlands, Alaska. *Wetlands* 32:301-310.
- <sup>v</sup> Callahan, M.K., M.C. Rains, J.C. Bellino, C.M. Walker, S.J. Baird, D.F. Whigham, and R.S. King (2014) Controls on temperature in salmonid-bearing headwater streams in two common hydrogeologic settings, Kenai Peninsula, Alaska. *Journal of the American Water Resources Assoc.* 1-15. doi:10.1111/jawr.12235
- <sup>vi</sup> Alaska Department of Fish and Game, Division of Sport Fish (2008) Economic Impacts and Contributions of Sportfishing in Alaska, Professional Paper No. 08-01, Anchorage. <http://www.adfg.alaska.gov/FedAidpdfs/PP08-01.pdf>
- <sup>vii</sup> Knapp, G., M. Guettabi, and S. Goldsmith (2013) The Economic Importance of the Bristol Bay Salmon Fishery. [http://www.iser.uaa.alaska.edu/people/knapp/personal/2013\\_04-TheEconomicImportanceOfTheBristolBaySalmonIndustry.pdf](http://www.iser.uaa.alaska.edu/people/knapp/personal/2013_04-TheEconomicImportanceOfTheBristolBaySalmonIndustry.pdf)
- <sup>viii</sup> USDA Natural Resources Conservation Service (2015) Alaska Snow Survey Report, March 1, 2015. <http://ambcs.org/pub/BasinRpt/2015/mar.pdf>
- <sup>ix</sup> State of Alaska Office of Management and Budget, FY 2015 Capital Budget – enacted. [https://www.omb.alaska.gov/ombfiles/15\\_budget/PDFs/FY14\\_and\\_FY15\\_Projects\\_by\\_Department.pdf](https://www.omb.alaska.gov/ombfiles/15_budget/PDFs/FY14_and_FY15_Projects_by_Department.pdf)
- <sup>x</sup> U.S. Geological Survey (2002) Ground-water age and its water management implications, Cook Inlet Basin, Alaska. USGS Fact Sheet 022-02. <http://pubs.usgs.gov/fs/fs-022-02/>