



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
WATER AND WATERSHEDS

MAY 17 2016

Mr. Michael Tehan
Assistant Regional Administrator
Interior Columbia Basin Area Office
1201 NE Lloyd Boulevard
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Portland, Oregon 97232

RE: (Corrected) EPA Comments on NOAA Fisheries 2015 Adult Sockeye Salmon Passage April 2016 draft Report

The U.S. Environmental Protection Agency, Region 10 has long advocated for increased attention and implementation actions to address and lower high water temperatures in the Columbia and Snake Rivers. The need to lower water temperatures becomes more critical as the Pacific Northwest Region continues to address and mitigate climate change. Past EPA Region 10 work efforts to address high water temperatures which can inform future work include the 2003 Preliminary Columbia River TMDL, the Water Quality Plan and implementation actions developed as a part of the 2000 FCRPS Biological Opinion, and the annual US Army Corps of Engineers Water Quality Plan until 2009.

Given this focus of EPA Region 10 on addressing high water temperatures, we greatly appreciate the opportunity to provide comments on the draft 2015 Adult Sockeye Salmon Passage Report and we look forward to further opportunities to work with NOAA, and other federal, state and tribal agencies to implement actions to reduce water temperatures in the Columbia and Snake Rivers, including our collective commitment to develop a Columbia River Cold Water Refugia Plan.

As noted in the report, unusually warm Columbia and Snake River temperatures in June and July resulted in dramatic loss of adult sockeye salmon in 2015. The EPA believes the report provides a good summary of the conditions that resulted in the loss of adult sockeye and also supports the recommendations in the report. However, the recommendations in the report are limited to micro-scale temperature improvements at specific dams. The EPA believes some additional recommendations should be included that focus on reducing the overall river temperatures during the latter part of June and July to improve adult sockeye survival through the Lower Columbia and Lower Snake Rivers.

As data summaries in the report show (e.g., Figure 9), 20°C temperatures and higher are associated with significant adult sockeye mortality during their upstream migration. Accordingly, mitigation measures to keep Lower Columbia and Lower Snake River temperatures below 20°C during the adult sockeye migration should be evaluated. Typically, the Lower Columbia and Snake Rivers don't reach 20°C until about mid-July. However, 20°C is reached earlier in years when early summer temperatures are warmer than normal, such as in 2015. Under these warmer than normal years, the EPA recommends mitigation measures be evaluated to maintain temperature below 20°C in June and most of July.

As described in the report, releases of cold water from Dworshak Reservoir have been a vital temperature migration measure for the Lower Snake River. The EPA recommends that the report contain a recommendation to evaluate the Dworshak cold water release program to maintain Lower Snake River temperatures below 20°C in June and most of July during the adult sockeye run. This could include, for example, cold water releases to maintain 18°C at Lower Granite Dam in June and part of July in order to keep as much of the Lower Snake River below 20°C as feasible. As depicted in the enclosed Figure 1, temperatures exiting Lower Granite Dam in 2015 exceeded 18°C much of June; and unfortunately, exceeded 20°C in early July due to the monitoring malfunction described in the report. Maintaining 18°C temperatures at Lower Granite Dam in 2015, and in warmer than normal future years, could reduce adult sockeye mortality in the Snake River. The EPA recognizes that there are constraints and other temperature mitigation objectives of the Dworshak cold water release program that would need to be fully considered as part of this recommendation and that involvement of the Nez Perce Tribe and others would be essential.

In addition to including a recommendation in the report to evaluate the Dworshak cold water release program as suggested above, the EPA recommends the report include a recommendation to evaluate Lower Snake Dam operational measures to maximize the transport of cooler water exiting Lower Granite Dam to maintain cooler temperatures downstream to the confluence with the Columbia River.

The EPA also recommends that the report contain a recommendation to evaluate cooler releases from Grand Coulee Dam to reduce temperatures in the Lower Columbia River during the adult sockeye migration period in June and early July when temperatures there are unusually warm, such as in 2015. In 2003, the Bureau of Recreation prepared a draft report, which indicated there is stratification that occurs in Lake Roosevelt and there are potential options to release colder water. The EPA does not know if stratification occurred in June and early July in 2015 that would have created some potential for cold water releases during this timeframe; but, believes it is important to examine this potential along with analyzing whether such cold water releases could reduce temperatures in the Lower Columbia River where significant sockeye mortality occurred in 2015.

Although the above focus is on sockeye salmon, the EPA believes maintaining 20°C or below temperatures in the Lower Columbia and Snake Rivers during the late June and July timeframe would be beneficial for adult summer Chinook and steelhead survival as well and would also be beneficial to juvenile salmon and steelhead out migrating during this period.

Again, thank you for the opportunity to comment on this draft report. We would be glad to discuss our recommendations with you and your staff. If you have any questions please contact me at (206) 553-1855 and for any questions related to our technical recommendations above, please contact John Palmer at (206) 553-6521.

Sincerely,



Daniel D. Opalski, Director
Office of Water and Watersheds

Enclosure

Figure 1 – Lower Granite Dam 2015 (blue) and 2006-2015 average (purple) tailrace temperatures and adult sockeye passage for 2015 (red) and 2006-2015 average (green)

