

## Warming water and fish

By Miles McPhee Naches  
*Yakima Herald*, Feb 16, 2016

To the editor — In a Feb. 6 guest editorial, county Commissioner Mike Leita argues that climate change necessitates implementation of the Yakima Basin Integrated Plan, including a controversial new dam at Bumping Lake, which in the past has repeatedly failed cost/benefit analyses. The latest, issued in 2014 by the Washington Water Research Center, found that Bumping returned 18 cents in benefit for each dollar spent.

While it is gratifying to see a local elected official acknowledge the science of global warming and its impact on snowpack, Mr. Leita ignores an important additional aspect: the effect of warming water temperatures on anadromous fish. The latter is important, because according to the Bureau of Reclamation, “passive-use” value (the amount that all Northwest households would be willing to pay) of restoring sockeye salmon to the Yakima Basin comprises 75 to 90 percent of the prospective Integrated Plan benefit.

Sockeye salmon stop migrating and spawning when water temperatures exceed 70 degrees F, as they did in the Yakima Basin for much of the 2015 summer and will again in a warmer future. While Integrated Plan conservation and water marketing are valuable goals, climate change almost certainly negates a main selling point proponents used to entrain support from the tribe and a few environmental organizations.

---

**Miles McPhee:** *has a PhD in Geophysical Fluid Dynamics from UW and has spent 40+ years studying ice-ocean exchanges in both polar regions, most of Miles’ research was funded by the Office of Naval Research and National Science Foundation. Miles has authored or co-authored about 60 refereed papers, several book chapters and a book: Air-Ice-Ocean Interaction. Miles work during the 1980s and ‘90s on ice-ocean exchanges is used today in climate modeling – based on his measurements, he was one of the first to suggest that sea ice was rapidly disappearing. For CV and bibliography: <http://mcpheeresearch.com/>*