

Goals and Scientific Basis for the "Protecting Cold Waters" Rule July 25, 2014

Members of the Board of Forestry:

My name is John Westall. As a retired environmental chemist, watershed council volunteer, OSWA member, and small-woodland owner, I was interested in understanding more about the goals and scientific basis behind the Protecting Cold Water (PCW) rule. When I started out I didn't have any particular agenda other than my own education; I thought I'd just be reading a lot and organizing my thoughts on paper. But what I found was so surprising and puzzling that I took the time to write it out more formally in an attempt to get some answers. Here are a few of the issues I address in the write-up.

In 2003 EPA published its Guidance to the States and Tribes on Water Quality Standards for Temperature. For the *numeric criteria*, the Guidance cites and discusses the scientific evidence at great length. In contrast, for the PCW rule, the Guidance cites and discusses no scientific evidence, but just refers to the antidegradation policy and lists several "potential benefits."

Several questions arose as I wondered about that.

The first question is about goals. One goal could be, pull out all the stops, spare no effort, and allow no significant human impact on temperature in an attempt to provide the "best-possible" thermal habitat for salmonids, which is operationally defined by the rule as "no human impact." The logic here seems simple enough not to require a scientific review. Another goal could be, do what is necessary to protect the salmonids, but don't go overboard with measures that have not been shown to be necessary or effective. That would require a scientific review.

Then I wondered about the scope of the rule, which is limited controlling heat added due to human activities. If added heat were the only aspect of the habitat that had been altered in the last 200 years, then one might reasonably conclude, without a detailed scientific review, that controlling added heat would significantly protect the habitat and the salmonids. But virtually all aspects of the habitat have been altered, including many that may be at least as important as controlling added heat in maintaining a healthful thermal habitat – think for example of channel structure, stream bed load, floodplain connectivity and alluvial aquifer recharge, etc. etc. So the question arises, is the intended "best-possible" habitat so narrow in scope that it's not best-possible at all? That would require a scientific review.

In the face of all this uncertainty one could:

- throw up ones hands, say it's too complicated to do anything rationally, so it's better to do nothing;
- accept a simple PCW rule axiomatically, with no discussion of evidence, necessity and sufficiency, and develop corresponding BMPs;
- Acknowledge the complexity of the habitat, determine what is necessary to protect the salmonids and develop BMPs to attain what is shown to be necessary.

I think the latter approach makes the most sense.

I did contact two members of the review team that worked on the PCW rule and ask for their comments on a draft. They didn't exactly agree to respond, but did say would have a look at it. After over a month and a few follow up attempts, I've heard nothing.