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Curt Melcher
Director, Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive, SE
Salem, OR 97302

Dear Director Melcher:

I feel compelled to write to you today to call to your attention what I can only characterize as a lack of scientific accuracy, and even integrity, in reporting the results of the Oregon Department of Fish and Wildlife (ODFW) recent redband trout sampling on the lower Deschutes River. This sampling has been conducted in recent years in response to questions about the status of the lower Deschutes trout population, given recent observed changes in the aquatic ecology of the river below the Pelton-Round Butte Hydroelectric Complex. These ecological changes follow the implementation of a Selective Water Withdrawal tower in Lake Billy Chinook, resulting in discharges of warmer, more nutrient-laden surface water into the lower Deschutes River.

In short, ODFW has made statements about the actual population of lower Deschutes River redband trout that I find extremely alarming. Most recently, an April 21, 2017 Field Report to the Oregon Fish and Wildlife Commission (Commission), provided to the Commission as part of their April 22, 2017 monthly meeting material, makes the following statement: "Deschutes redband appeared to be in good abundance based on how easily (sic) they were to catch during this year's monitoring. The 2017 sampling experienced the highest catch-per-unit of effort of the last four." This statement and others like it, which are now being repeated by other Deschutes Basin stakeholders, are misleading and wholly unsupported by the data collected.

As you may recall, I worked on the lower Deschutes River in several capacities for the ODFW starting in 1977. In total, I spent more than 20 years of my 30-year career working on the lower 100 miles of the Deschutes, a place I continue to have a deep and abiding love for. During those years, I spent much time electrofishing Deschutes River redband trout, principally using Peterson mark-recapture methodology, a widely-accepted technique for estimating the number of fish in a given river reach. I have a detailed understanding of that technique, and of drift boat electrofishing on the Deschutes River generally. Additionally, I am very familiar with the statistical design and methodologies for mark and recapture population estimation. I understand that the success of drift boat electrofishing in the Deschutes, commonly measured on a catch per unit effort basis, is highly variable depending on conditions such as flow, water temperature, chemistry, and turbidity present when the sample is collected, as well as the experience of the sampling crew.

No mark and recapture studies have been done by ODFW in recent years to estimate redband trout abundance. Rather, ODFW staff has only conducted electrofishing to collect a sample of trout for age, growth, stomach analysis and condition factor. This sampling is not designed to, nor is it capable of, estimating abundance or placing confidence limits around those estimates. ODFW seems to recognize the limitations of the data collected—a March 18, 2016 Field Report to the Oregon Fish and Wildlife Commission (Commission) describing Deschutes redband sampling states: *“Abundance will not be estimated due to the difficulty of accurately estimating trout abundance in large productive rivers like the Deschutes.”* Disturbingly, despite this recognition, ODFW continues to make statements about redband trout abundance based on this electrofishing. Lower Deschutes River redband trout studies (2014, 2015) submitted to the Commission, as well as language used in official reports and public presentations (PGE Fish Committee meetings, PGE Fisheries Workshop, Deschutes Club presentations, etc) all inappropriately and inaccurately reference population-level abundance as if the data support these claims.

Most recently, the April 21, 2017 Field Report provided to the Commission states that “Deschutes redband appeared to be in good abundance...” Given the inherent variability with drift boat electrofishing in the Deschutes, making statements on the redband population strength based on 2017 sampling (done under high flows and turbid conditions typically associated with a high electrofishing catch per unit effort) is wildly misleading. Believe me, my professional life would have been much easier if electrofishing catch per unit effort in the Deschutes was an accurate measure of redband abundance. Unfortunately, it is not.

The sampling and data analysis ODFW has performed to date are simply not designed nor statistically powered to determine the health of the redband trout population. Nor is it possible to make assessments of trout population size and/or abundance from the data collected to date.

It is also incorrect and misleading for ODFW to characterize the current Deschutes redband trout sampling as “replicating surveys done in the 1980’s.” I’m quite sure of this, as I performed much of the ODFW sampling in the 1980s and early 1990s that the agency now claims is being replicated. The redband trout sampling ODFW did at that time was done for several reasons, but chief among them was to estimate trout abundance using mark and recapture methodology, specifically designed and conducted to yield a point estimate of trout abundance bounded by statistical confidence intervals. The current sampling work does **not** do that, but is rather a limited sample of trout to collect information on a variety of metrics—but certainly not to estimate abundance.

These oversights and failures to accurately characterize the results of ODFW’s Deschutes redband trout studies are troubling. The failings undermine your ability to meet ODFW’s mission and greatly underserves your license holders and the general public. I am extremely hopeful that the redband trout population in the Deschutes River is healthy and that current abundance is, in fact, similar to historic levels. But at the moment we have no way of knowing this, as ODFW has not adequately planned or conducted sampling to accurately measure redband abundance. Until these studies are conducted, serious questions about the overall health of the aquatic ecosystem of the Deschutes remain unanswered. ODFW is supposed to speak for the fish, and I urge you to make an honest effort of it.

Accordingly, I encourage you to clarify these shortcomings by, at a minimum, directing staff to prepare a briefing document for the Oregon Fish and Wildlife Commission's review at its next meeting pointing out that the effectiveness of the overall monitoring program in assessing redband trout abundance in the Deschutes has been erroneously and greatly overstated, and that the data that you have recently collected do not support the conclusions you have publicly made.

Thank you for the opportunity to make these comments and I look forward to your timely written response.

Sincerely,

Steve Pribyl

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