Thousands of fish have died in the lower Klamath River because we weren’t “certain” about the effects of withholding water.

By Joe Whitworth

Scientists commonly define “scientific certainty” as being 95 percent sure there’s a clear link between a cause and an effect.

The complexity and ever-changing nature of ecosystems, however, make scientific uncertainty the norm. To some, this argues for playing things conservatively. For others, it represents the opportunity to charge ahead.

In the 1930s, uncertain what effect hydropower dams would have on salmon passage — on we built. In the 1950s, uncertain whether heavy logging near salmon streams would affect spawning gravel — on we cut. In the 1970s, uncertain what effect development and industrial runoff would have on the Willamette River — on we went.

Each time, we used our uncertainty as cover for taking what we wanted from the ecosystem, and to heck with the longer-term, “uncertain” effects.

And each time, salmon paid the price.

This spring, the Department of Interior tightly spun a National Academy of Sciences study that deemed it uncertain whether withholding Klamath water for irrigation would impair the river’s water quality, in turn hurting chinook and coho salmon downstream. That uncertainty led to the decision to hold back water for irrigation, and we are now witness to (some are party to) the largest salmon kill in memory.

Much of our information comes through the mass media, and properly weighting the information we receive is difficult. Take two oped pieces side by side. One is rigorously researched and grounded in vast peer-reviewed science. The other, crafted cleverly, simply calls the science of the first piece into question by pointing out that not all scientists agree completely on the issue.

Because both pieces have made the paper, they carry seemingly equal weight.

The reader thinks, “Well, the issue is so complex that not even scientists agree” and tunes out. And our broader culture has taught us to tune out quickly. This can make for savvy consumers, but it undercuts folks’ ability to sift through complicated matters.

The subtleties of natural resource issues are difficult to explain and hard to understand. And historically, the decision-making generation rarely has had to pay the price of a bad one; that part gets passed on. But because natural resources are finite, and the politicization of science that has occurred recently will likely continue, we (politicians, press, public) need to do a better job of dealing with scientific uncertainty.

Where outcomes of a given activity or program are unclear, or where irreversible damage to the resource could occur, lack of scientific certainty should not be used as an excuse to carry on the activity in question.

Lack of science should not be heralded as bad science, but rather be the impetus to fully fund agencies in order to get complete science. Elected officials can no longer starve agency budgets and then grandstand about their shortcomings, particularly in the face of increasingly complex resource questions.

To some extent, we’ll always be flying blind when making decisions. But placing the burden on the proposed action to demonstrate that it will not be detrimental to the resource seems more appropriate than asking the resource to demonstrate it won’t be harmed. This conservatism has been called the “precautionary principle,” but it boils down to better safe than sorry.

Such an ethic would preserve, rather than foreclose, natural resource options for those that come after us.

In the face of scientific uncertainty, the decisions we make today — whether guided by reasoned caution or polished greed — directly translate into the life quality we have tomorrow. Our challenge is to stay intellectually honest and focused on finding enduring solutions, not shortcuts.