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# Floods raise questions about salmon projects

By Bob Zybach

In recent years there has been a growing concern that many Western Oregon salmon populations have been decimated or gone extinct. A similar concern existed for Oregon's elk populations a century ago, during the 1890s. At that time, commercial hunting had eliminated or greatly reduced elk numbers throughout most of their historical range within the state.

Some of the blame for the current situation has been placed on timberland owners and loggers for systematically removing large woody debris and other structural materials from streams and flood plains. It has been stated that these removals have caused poorer habitat conditions for spawning adult salmon and their progeny, directly resulting in reduced fish populations.

In response to this concern, the federal government and many private landowners have completed a number of streamside "restoration" projects in recent times to enhance salmon populations by restoring large woody debris accumulations in rivers and creeks. Others are being planned. Many of these projects have also served as opportunities to "retrain" displaced timber workers and commercial fishermen.

The usefulness, quality, costs and legiti-

mate job opportunities provided by these related efforts have been drawn into question. The western Oregon floods of last month offer an ideal situation to address those questions and to evaluate the need and design for future restoration projects.

By scouring out numerous fishing holes and spawning beds, and by transporting massive amounts of large woody debris from creeks and rivers to estuaries and the ocean, the 1996 floods have significantly altered current and future habitat conditions for native fish populations. Because floods of this magnitude have been relatively common in Western Oregon during the past 200 years (occurring, on average, about every 10 to 20 years), a situation has presented itself in which we can learn much regarding the role of large woody debris in riparian zones, its relationship to salmon populations, and the adequacy and economics of restoration projects intended to stabilize or increase those populations.

The historical record of Western Oregon demonstrates that 1996 flood levels will likely be experienced on one or more occasions by each new generation of Willamette Valley residents and visitors.

Because large floods have been common in Western Oregon during past times and because salmon populations have also been great (at times) during the same pe-

riod, we can assume that these animals are either resilient to such occurrences, or that such modifications to their freshwater habitat are an important part of their life histories.

Because of the changes brought about by the recent flooding, now is an excellent time to assess the quality and value of recent restoration efforts. Questions that should be asked include:

- 1) What is the current condition of stream-side restoration projects compared to their initial projections?
- 2) What do restoration projects actually cost per mile or per acre in terms of planning, training, supervision, transportation, wages, materials, changed timber revenues, etc.?
- 3) Should we first repair flood "damage" to these projects before undertaking other, similar, efforts?
- 4) Has there been any measurable change in fish populations or viability that can be attributed to these efforts?
- 5) How many trained workers are still actively engaged in these types of jobs, and how many viable businesses have been created as a result?

These are important questions. Much has been written on these topics during the past few years and now is an excellent time to begin separating science from speculation, fact from fiction.

Based upon the historical record, it can be concluded that the salmon problem of the 1990s is similar to the elk problem of the 1890s, when elk populations had been eliminated or greatly reduced throughout most of their documented range in Oregon. Today, our elk populations are as high or higher than they have ever been. A statewide ban on killing elk between 1900 and 1910 coupled with the introduction of breeding adults from other states has resulted in a healthy, self-sustaining population of these animals.

I believe a similar approach, one that introduces additional spawning fish by artificial means and that eliminates or reduces commercial and sport harvesting, will have similar, positive, results for our salmon populations.

By contrast, I suspect that recent "reconstruction" projects will prove to be costly and ephemeral attempts to control a nature that is too powerful, dynamic, and unpredictable to allow these efforts to be of much long-term value. And it won't matter whether those values are measured in terms of dollars, jobs, fish, or aesthetics.

Bob Zybach of Corvallis is a forest history researcher. He holds a degree in forestry from Oregon State University, and was a reforestation contractor for nearly 20 years.