W A S H I N G T O N T R O U T

September 21, 2005

Peter Morrison
Executive Director
Pacific Biodiversity Institute
PO Box 298
Winthrop, WA 98862

Re: Chewuch Fish Dam and Supplementation of Chinook Salmon in the Methow River.

Dear Peter,

Washington Trout believes the plans of Douglas County PUD to place a new Fish Trap Dam on the Chewuch River are ill-conceived and likely to be detrimental to the survival and recovery of native spring chinook in the Chewuch River. Washington Trout has deep concerns regarding the use of hatchery supplementation to conserve and rebuild populations of Upper Columbia River spring chinook salmon in the Methow River Basin. Salmon supplementation as a strategy for conserving or recovering wild salmon is extremely risky, unproven, and subject to a great amount of scientific controversy. Most independent scientists are skeptical that supplementation can provide significant increases in wild-salmon abundance, and many believe it is *highly likely* that supplementation will significantly reduce the productivity and fitness of target salmon populations. No current supplementation programs in the Columbia Basin have a demonstrated record of success, and none have been fully evaluated in any systematic and scientifically credible manner.

Douglas County PUD appears to be strongly motivated by a desire to secure mitigation credits under the Mid-Columbia Habitat Conservation Plan (HCP) for the impact of Wells Dam on native salmon and steelhead in the Methow Basin. The PUD appears to receive mitigation credit for the number of wild spring chinook salmon it removes each year from the Chewuch, mainstem Methow, and Twisp rivers for use as broodstock in the Methow Hatchery supplementation program. This is a poor incentive that can easily lead to the further decline of spring chinook populations in the Methow.

We recommend that the PUD seek mitigation credits for contributing to improvements in habitat conditions that will benefit spring chinook spawning, juvenile rearing, and downstream and upstream passage in the Methow and Columbia River mainstem, and for helping wild spring chinook reach their natural spawning grounds under their own power.

Risks of Supplementation

Supplementation involves taking naturally produced adult salmon into a hatchery where they are spawned and the juvenile progeny reared to outmigrant smolt stage. The conservation objective of supplementation is to provide a numerical boost to the wild population until the environmental factors limiting the productivity of the wild population are remedied. While this all sounds good, there are very sound biological reasons to believe that this procedure cannot work.

The Salmon Recovery Science Review Panel (RSRP) provides independent review of NOAA Fisheries salmon-recovery planning efforts under the Endangered Species Act. The RSRP has published two recent reports describing the risks of using hatcheries in salmon recovery and evaluating how to determine whether any specific use of hatcheries to conserve wild salmon actually achieved that purpose. These reports (dated July 21 – 23, 2003 and August 30- September 1, 2004) are available on the NOAA Fisheries Northwest Region Home Page, under RSRP.

In June 2003 the Independent Science Advisory Board (ISAB), which provides scientific review of salmon recovery in the Columbia Basin to NOAA Fisheries and to the Northwest Power and Conservation Council, published its Review of Salmon and Steelhead Supplementation (available at the Conservation Council website under ISAB, document # ISAB 2003-3).

Both reviews note that supplementation is considered "experimental" and were in general agreement in their assessments of the uncertainties and the risks to wild salmon from supplementation as well as from more traditional hatchery practices. Both highlighted the very real risk that hatchery supplementation will result in the erosion (decline) of the fitness of the targeted wild populations. Even if a supplementation program succeeds in increasing the numbers of naturally spawning salmon all or a majority of those fish will be less fit (will produce fewer adult offspring per individual) than members of the population before the supplementation program started.

A genuine supplementation program must at some point stop, and allow the (presumably) numerically-increased population to fend for itself. If, as both the ISAB and the RSRP found likely, each fish in the enlarged population is less fit than before supplementation, the population will decline even faster when supplementation is stopped, despite starting out at a larger size. In a case like the Chewuch, this will turn a population that is capable of barely holding on into a rapidly declining population destined for extinction, or permanent hatchery intervention. Instead of conserving the Chewuch's wild spring chinook, supplementation will have turned it into a population that cannot exist on its own.

There is, to be sure, controversy regarding whether such a result might occur in any specific situation, or regarding how fast fitness might be recovered in the wild after supplementation ceases. But to proceed optimistically with supplementation because of this uncertainty is simply to ignore and dismiss the risk. In 2003, The ISAB found a lack of adequate monitoring and evaluation, and a poor performance record, in most of the supplementation programs it reviewed, and the ISAB strongly recommended that no new supplementation programs be initiated in the Columbia Basin until basic questions about the effects, impacts, and risks of supplementation are answered. At any rate, because supplementation is still experimental at best, it is crucial that any new or revised supplementation effort include measures that can provide a scientifically credible evaluation of whether or not the effort is achieving its predicted objectives without also producing intolerable harmful impacts.

Current supplementation efforts in the Methow basin, including the planned installation of the new fish trap dam on the Chewuch, fail to incorporate even the most basic measures capable of producing a rigorous evaluation of the supplementation effort. Both the ISAB and the RSRP stress that supplementation programs must be monitored in paired experiments with unsupplemented control basins and populations. In this regard, the ISAB notes that performance indicators are needed in three areas:

1. target population abundance, hatchery productivity and natural spawning productivity during supplementation, compared to unsupplemented controls;
2. target population long-term fitness after supplementation, compared to unsupplemented controls;
3. non-target population impacts (e.g., effects of steelhead supplementation on the abundance and productivity of chinook populations in the target area, compared to unsupplemented controls)." (ISAB 2003-3, Executive Summary, page ix.)

The Chewuch proposal does not appear to meet these minimal conditions for a scientifically-credible supplementation effort.

An Alternative to the Current Program

We believe that Douglas County PUD should endeavor to comply with the ISAB's recommendations for supplementation efforts and should seek mitigation credits for such compliance. This would require the following:

1. Establish the Chewuch and the Methow River mainstem upstream of the confluence with the Chewuch as unsupplemented control basins for carefully-specified time-limited supplementation programs on the Twisp River and on the Methow River downstream of the Chewuch.
2. Adopt a set of performance indicators and associated standards that will be measured in both supplemented and unsupplemented-control populations. Indicators should include some or all of the following: annual redd counts, annual number of male and female spawners, summer/fall parr densities, number of outmigrant smolts, smolt-to-adult and spawner-to-spawner recruitment rates.
3. Establish a termination date for all supplementation. We would recommend a maximum duration of one generations of spring chinook (approximately 5 years).

This would establish a framework for effectively evaluating supplementation as a conservation strategy in the Methow basin.

Washington Trout is opposed to Methow River supplementation efforts as currently conducted. We believe these efforts carry a high risk of furthering the decline of Endangered spring chinook in the supplemented subbasins. Moreover, the programs are conducted in such a manner that it is nearly impossible to evaluate whether or not they are having the intended conservation effect.

The alternative approach suggested here could produce a win-win for both Methow Valley citizens and Douglas County PUD. Leaving the Chewuch an unsupplemented control stream, would facilitate the credible evaluation of other ongoing supplementation efforts in the Methow Basin consistent with the recommendations of the ISAB Review of Supplementation in the Columbia River Basin. This should conceivably earn mitigation credits for the PUD, while providing a better opportunity for conserving and recovering spring chinook populations in the Methow than either the status quo or the PUD's current plan to install a new fish trap dam in the Chewuch.

Sincerely,

Kurt Beardslee, Executive Director
Washington Trout