

## Dworshak NFH Spring Chinook Program

### Key Findings

There were a few Key Findings we'd like to clarify:

*2. The shift to native broodstock and to release full term smolts rather than parr has been justified. One result, however, has been an increase in the production of jacks.*

For the Dworshak NFH spring Chinook salmon program there was no shift to native broodstock, as there is no native broodstock in the Clearwater River. In 1989 there was a prioritization to utilize returning Dworshak Chinook for broodstock, so we would hopefully benefit from any local adaptation. Also Dworshak has always released full term smolts, it never was a parr program.

*3. Although performance of fish in the hatchery is measured based on survival, and in-hatchery survival rates appear to be adequate to the smolt stage (mean 83.2%), there was little information presented to indicate that other aspects of smolt quality are being significantly improved upon at the hatchery at this time.*

We would need to know specifically what 'other aspects of smolt quality' the ISRP is referring to before we can adequately address this comment. We did present information on the BKD culling program and how that has significantly reduced the incidence of BKD in the spring Chinook production program. Also why you can always make improvements in production, significant improvements are hard to achieve. The recent 5 year survival to smolt stage is 87.1%, however, if you look at the data below you can see that it would be tough to identify where we might make additional improvements, especially when you factor in enumeration errors.

<u>Life Stage Survival</u>	<u>5 Yr Ave</u>
Green eggs to eye up	96.8%
Eyed eggs to marking	92.3%
Marking to smolt release	97.5%
Overall green to smolt	87.1%

*6. The ecological and genetic impacts of the programs on wild fish are not evaluated in the material provided. As in the Clearwater hatchery, we note that the percentage of jacks among hatchery fish returns has increased in 2007, 2008, and 2009 returns years.*

Again we would need more specifics to adequately address this comment, since there are no wild spring Chinook salmon populations remaining in the Clearwater River. Is the concern to other species within the basin or wild fish outside the basin? We do evaluate the programs effects on ESA-listed salmonid populations in the HGMP. However, even with considerable sampling efforts and data collection, it would be quite difficult to demonstrate quantitatively that the hatchery program was really impacting

wild fish populations. For example, we would have to know that Dworshak spring Chinook are actually spawning with wild fish to even know there is a potential for genetic impacts.

Also the increase in the percentage of jacks occurred throughout the Columbia basin in 2007, 2008, and 2009 return years not just at Dworshak or in Clearwater basin, as suggested.

### **Outlook and Recommendations Response**

*The main benefit of the program as of 2010 (and the prognosis) is to provide continued State recreational and Tribal harvest fisheries well below mitigation goals.*

The LSRCP hatchery program was originally established to offset losses caused by the four Lower Snake River dam and navigation projects and that includes loss of State recreational and Tribal harvest fisheries. Dworshak NFH was included in the LSRCP program to help replace those loss fisheries. Since Dworshak is located in a nonproduction area and in a basin that does not have listed spring Chinook, it can provide fisheries. This also helps to compensate for other programs that cannot provide fisheries because of ESA concerns or low adult returns.

*A science-based plan for deciding the most goal-oriented disposition of returning adults (harvest, allow to spawn naturally, broodstock, etc.) was not provided.*

As mentioned in your Introduction paragraph 'The hatchery is not located in a natural spawning area.' Therefore the only uses for returning adults are for broodstock and harvest; any natural spawning above the hatchery would be considered straying.

*To an outside evaluator, the close proximity of Clearwater and Dworshak LSRCP programs suggests that the programs should be combined and administered jointly with overall goal-setting process.*

The two programs, while not jointly administered, do coordinate closely and together the two programs mesh very well. Coordination occurs formally through a joint Clearwater Basin Annual Operating Plan (AOP) and also in-season with weekly conference calls. The programs also coordinate closely on water issues since they both utilize water from a Dworshak reservoir pipeline. Dworshak NFH is not located in a production area and has a ladder at the facility, whereas Clearwater Hatchery does not have a ladder, but operates satellite facilities located in natural production areas and employs supplementation of natural spawning as a component of the program. Dworshak's primary goal is to replace loss sport and tribal fisheries, while Clearwater's primary goal is to restore and maintain natural populations of Chinook in the Clearwater River, while contributing to sport and tribal fisheries.

*How many fish should be used to meet longer-term mitigation goals before immediate harvest is pursued.*

Since there is no natural spawning component for the Dworshak Chinook program its uses are broodstock and harvest. Broodstock need is integral in determining yearly harvest goals, so broodstock

collection is prioritized especially in low return years. Furthermore, we believe that providing harvest, at even a low level, is very important and essential to fostering public support for spring Chinook salmon recovery efforts throughout the Snake River basin and especially in areas where harvest cannot yet occur because of low returns and ESA concerns.