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*The Native Fish Society is a forward-thinking organization guided by the best available science to advocate for historically abundant wild, native fish and promote the stewardship of habitats that sustain them*

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## **Recovery of Snake River Threatened Salmonids**

By Bill Bakke

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The National Marine Fisheries Service (NMFS) is developing a recovery plan in cooperation with ODFW and the tribes for Oregon rivers flowing into the Snake River. That recovery plan will be the basis for rebuilding wild native salmon and steelhead in Northeast Oregon rivers such as the Grande Ronde and Imnaha rivers.

In the late 1970s the NMFS were proposing to list the Snake River chinook salmon under the Endangered Species Act, but abandoned that initiative when Congress passed the Northwest Power Act that promised to provide the funds to recover salmon populations. However that program failed and by the 1990s, it was obvious that wild chinook in the Snake Basin were close to extinction.

When I submitted petitions to list the chinook in the Snake Basin in 1990 I was attempting to save the wild runs from extinction. The chinook were listed in 1991. In the 19 years since then, some important changes were made in the conservation management of spring and summer chinook. For example, Oregon took action on the Grande Ronde by eliminating non-native hatchery chinook from Carson Hatchery on the Wind River located in southern Washington State and from other hatcheries such as Rapid River in Idaho. The purpose was to remove these non-native hatchery fish to protect native, wild spring chinook in the Grande Ronde. Oregon identified six distinct wild chinook populations in the Grande Ronde River following genetic analysis. As is typical of mitigation hatchery programs non-native chinook were used because there was a source of eggs available in hatcheries. The purpose of the mitigation program is to replace the wild salmon lost to dam development on the Snake River and use those non-native hatchery fish to provide harvest for commercial and sport fisheries. Mitigation hatchery policy does not attempt to replace the wild fish damaged by development, for the fish management agencies are dominated by the desire to provide fish for harvest.

Oregon took a different view of mitigation. The ODFW had already designed a hatchery program for the Imnaha River chinook that is based on wild salmon conservation. This program was already in place because Oregon's Northeast hatchery program for that river was based on the best available science and the ODFW had not yet abandoned its emphasis on research and management policy based on science. Even though the Imnaha hatchery experiment using wild stock was ahead of its time, the ODFW did not take the same approach to wild salmon conservation in the Grande Ronde River. Apparently,

conservation on one river was enough. When the Snake River chinook were listed as a threatened species the work ODFW had done on the Imnaha and the people who were involved in its design and operation were still working in the area, so the Imnaha River chinook hatchery design was imported over the hill to redirect the chinook hatchery program in the Grande Ronde River.

ODFW terminated the non-native hatchery chinook program in the Grande Ronde River and based on genetic evidence that there are six distinct native wild chinook populations in the river, set about to design a conservation hatchery program based on these six distinct populations. Not willing to have all wild populations under hatchery policy, tributaries such as the Minam and Wenaha rivers and Joseph Creek were reserved for wild salmon and steelhead.

Nearly 20 years after being listed as a threatened species there is still no recovery plan for Snake River salmon and steelhead. This did not stop ODFW from improving its hatchery program for chinook, but steelhead are a very different story.

## STEELHEAD

The mitigation hatchery program for steelhead on the Grande Ronde River was tooled up by taking steelhead from Lower Granite Dam fishways in the spring. This ensured that a mix of steelhead from all tributaries above the dam were included in the hatchery program for the Grande Ronde River. Taking a generic mix of steelhead from the fishway also meant fish that had over-wintered in the Snake, Columbia and tributaries such as the Deschutes and John Day rivers were used to start the Grande Ronde hatchery broodstock. Stray hatchery steelhead in the Deschutes River have been recognized as a limiting factor in the recovery of native wild steelhead in that stream. In some years the strays make up 70% of the run and even though not all of them remain in the river to spawn, it is estimated that 50% of the strays do remain in the river.

Unlike ODFW's reform of the chinook hatchery program, there has been much less interest in changing the hatchery broodstock for the steelhead hatchery program. Recently, there has been an effort to capture steelhead in the Grande Ronde River for the hatchery. The assumption is that steelhead that enter the Grande Ronde are fish that will stray less than those that were initially taken from the fishway at lower Granite Dam. However, steelhead behavior in the Snake River is complex, for steelhead in other rivers use the Snake River for overwintering while a portion of the run enters their home river to overwinter. It is not clear that the Grande Ronde steelhead that are being captured in the river are from wild or hatchery parents.

Since the Grande Ronde River also flows through the state of Washington, hatchery steelhead from Skamania Hatchery on the Washougal River in the lower Columbia River are released. These non-native and non-ESU hatchery fish do not belong in a stream with threatened wild steelhead being protected under the ESA.

The recovery plan for wild threatened steelhead in the Grande Ronde River cannot be effective as long as it includes hatchery steelhead from sources outside the Grande Ronde River. As with spring chinook, a genetics evaluation of steelhead is needed to determine the abundance and distribution of wild steelhead in the watershed. A recovery program must be based on distinct stocks within the basin and the hatchery program must be designed to protect these wild stocks.

The mitigation hatchery program for the Snake River is operated under the Lower Snake River Compensation Plan, funded by the U.S. Fish and Wildlife Service (USFWS). It was started on unsound biological principles and certainly did not take into account the best available scientific information. It continues to be run primarily to replace wild steelhead with hatchery fish without regard for wild steelhead conservation. It was designed to add fish to the various fisheries rather than restore wild salmonids in the Snake Basin. The USFWS, tribes and fish management agencies in each state have been primarily interested in using hatcheries to increase fish for harvest. And it is this federal mitigation program as well as the federal dams that have caused the decline of wild salmonids in the Snake River, leading eventually to their protection under the ESA. Changing that established mind set of federal, state and tribal agencies and their federal funders in Congress is the challenge, for it means a total reformation of the so-called fish management program.

Even though recovery plans are not binding, the various land, water and fish management agencies are encouraged to carry the plan out to benefit the fish. Typically, these plans are written by the fish management agencies so they discuss in great detail the habitat issues that limit the recovery of salmonids while at the same time play down harvest and hatchery issues they have direct authority to control. If the Snake River Salmonid Recovery Plan is designed this way, it is unlikely the fish will get much benefit. What is needed by each government agency and the tribes is a commitment to implement the plan, monitor the effects and when problems are identified the monitoring program will be the basis for adaptive management. To be successful each agency must identify what it is going to do for salmonids, the person responsible for implementation in each agency, and a compliance monitoring plan to gauge how well the plan is being applied. We will see whether the Snake Basin Recovery Plan will break the mold and create a plan that actually works for recovery of spring chinook and summer steelhead.