Small Dams Removed from Shasta River to Improve Water Quality Conditions for Salmon

Thanks to the Shasta Valley Resource Conservation District, the cooperation of local ranchers and grant funding from several agencies, including the State Water Resource Control Board, Department of Fish and Game, US Fish and Wildlife Service, Natural Resource Conservation Service, five small dams are being removed from the Shasta River to improve habitat for salmon and steelhead trout.

The Shasta River drains 795,000 square miles in Siskiyou County, California and flows into the Klamath River near the Oregon border. Watershed elevations range from 2,000 feet at the mouth to 14,200 feet at the top of Mount Shasta (an active volcano) where glaciers provide a constant source of cold, clean water. Melting snow and glaciers percolate down through lava tubes that emerge as numerous large springs that flow into the River. This cool water source once provided very productive habitat for Spring Chinook, Fall Chinook, Coho Salmon and Steelhead Trout. The Shasta River has long been recognized as the single most important spawning tributary for salmon in the Klamath Basin. Counts of Fall Chinook returning to the Shasta (even after substantial declines) went as high as 82,000 in 1931. By the early 1990s they had dropped to a little over 500 fish. Spring Run Chinook no longer inhabit the river and Coho Salmon are listed as endangered under the State and Federal Endangered Species Acts. Reasons for the decline in fish populations have been attributed to poor water quality and fish migration barriers caused by dams. Poor water quality conditions include elevated stream temperatures and low dissolved oxygen levels. Salmon need cool, clean, oxygenated water in order to thrive.

Shasta River TMDL

The Shasta River is listed as impaired on the 303(d) list of the Federal Clean Water Act due to elevated stream temperatures and low dissolved oxygen levels. The Shasta River TMDL was adopted by the USEPA and became State law on January 26, 2007. The TMDL contains an Action Plan with the following requirements designed to reduce water temperatures and increase dissolved oxygen levels:

- Remove five minor impoundments or dams on the Shasta River.
- Protect streams from cattle grazing to increase shade and riparian vegetation.
- Reduce tail-water return flows that introduce warm nutrient rich water from pastureland.
- Reduce sediment, nutrients and other oxygen consuming materials from cities/towns, roads, etc.
- Increase dedicated cold water to the Shasta River .
- Address poor water quality conditions in Lake Shastina

Dam Removal Schedule

This past October (2007) two of the five dams were removed from the river. Two more dams are scheduled for removal next year. Once all the dams are removed water quality conditions are expected to improve and salmon will once again be able to more freely migrate up the river to spawn and reproduce.

Small Dam, known as Araujo Dam, prior to removal from the Shasta River last October (2007)

Free flowing Shasta River at the former location of Araujo Dam. October 2007

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