

Sacramento River fluctuations put salmon eggs at risk during run

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Posted: Dec. 12, 2011

Source: http://www.redbluffdailynews.com/ci_19488063

Chinook Salmon may be the king but, in a ecosystem in which water is limited, its eggs may be left high and dry.

Thousands of late fall salmon eggs in the Sacramento River that have yet to hatch are at risk of being dried up as the river fluctuates.

While many factors can influence the flow of the river, the most recent river changes can be attributed to operations at Keswick and Shasta dams.

At the start of the spawning season in October, river flows were around 7,000 cfs.

Since then the Bureau of Reclamation, which operates the dams, has dropped flows to around 5,800 cfs.

Any fluctuation in river flow, including a drop, is detrimental to the eggs that are just now developing into fry, said Tricia Parker Hamelberg, a fish biologist with the U.S. Fish and Wildlife Service.



Salmon eggs in gravel spawning grounds below the Keswick Dam are in danger of being dewatered after a drop in flows on the Sacramento River. (DN-Lor)

The last two weeks of December into early January are critical for fish development, and flows need to remain stabilized until the eggs are hatched.

"It's pretty upsetting to see this happening when there are fall Chinook salmon spawning on the Sacramento River," Parker Hamelberg said.

If water flows continue to be lowered, about 20 percent of the largest natural spawning population will be in danger of being dewatered, she said.

The service, in conjunction with the state Department of Fish and Game, has been conducting weekly fish count surveys and more recently looking for dewatered redds, which are dried out fish Advertisement nests.

Biologists did not find any dewatered redds during the last week of November after the bureau dropped river flows to around 6,000 cfs, but there are several redds in shallow water that are getting close to surfacing, said DFG Environmental Scientist Doug Killam.

While there is no way to quantify how many eggs are in the ground right now, there are at least 200 or more nests that each contain about 5,000 eggs within the 80- mile spawning ground that stretches from Keswick Dam south to Woodson Bridge in Corning.

Not all those eggs will survive because of natural predation and other factors, but to have them dry out because water flow is lowered is unacceptable, Killam said.

"We don't want reduced flows right now," Killam said. "We need to do what we can to help them (fish) out without requiring a lot restrictions or impacts to other water users."

DFG has made the bureau aware of the conditions in the river and asked that flows not be lowered, but the bureau has been slow to respond.

"They don't let us know how low they are going to go or what other actions they are going to do to minimize the impacts," Killam said.

Bureau of Reclamation spokesman Louis Moore said the bureau tries to balance the needs of all water users.

It becomes a problem when resources are limited.

"When you don't have the resources you have to reduce availability," Moore said.

Each river system has a group of people who represent different interests from fishing and farming to municipal and industrial uses, and all their concerns are taken into consideration, he said. While the bureau is absolutely concerned about the impacts of water levels on redds, no decision is made independently.

"We are all sitting around the table talking about what conditions work best," Moore said. "At that time you always talk about impacts."

Normally, water reductions at this time of the year would not have such a big impact but a late spawning season and limited rainfall have created the concerns.

Scott Ferris said he is worried it could lead to a decline in the wild salmon population.

Ferris is a fishing guide on the Sacramento River and a Tehama County Fish and Game Commissioner.

He works closely with the Greater Battle Creek Watershed Working Group in the Battle Creek Salmon and Steelhead Restoration Project.

"Wild fish are already at a disadvantage, and you disadvantage them more when you lower the flow," Ferris said.

"It's a problem that you would think (the bureau) would have considered before the spawning season."

Moore said the bureau does not set a schedule for flow changes ahead of time. Instead, it creates a forecast for operational changes at the dams. Weather conditions, water temperature, the amount of water already in the river are factors that influence the forecast and could lead to flow increases or reductions.

Still, Ferris said it's a matter of communication, and the bureau has been secretive about its plans to reduce flows.

"I understand they have to manage the water behind the dam for other users but you have to work together," he said.

"They need to let all users know what the schedule is."

Stabilized flows that don't go below 5,500 cfs until at least February would be best for redds right now, he said.

If flows continue to be lowered, the late fall wild salmon run could become extinct, which is particularly sad given recent numbers showing the wild salmon population is just now bouncing back from a two-year low.

"Get the water to the level where the farmers can use it and still allow the wild fish to survive," Ferris said.

"All these efforts have been made to restore the wild salmon population and now the bureau wants to leave the eggs high and dry."