

Dams Down Will Ranches Survive?

By Theodora Johnson

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After the Copco Dam was breached thick mud covered what was formerly Copco Lake. In late January many deer were found bogged down in the mud and had to be shot by the California Department of Fish & Wildlife. Since then more wildlife has been trapped in the deep mud.

Photo by Mel Fechter.

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The largest, most devastating dam removal experiment in modern history has reached the point of no return. As of January 23, 2024—despite opposition by a majority of local residents—the four hydroelectric dams on the Klamath River have been officially breached.

Ironically, dam removal proponents claimed the project would help salmon, but now the Klamath River is being polluted with millions of cubic yards of decomposed algae, organic deposition, chemicals, and fine silt that has built up behind the dams. Dead steelhead trout and other species are floating to the banks. Any salmon spawning beds in the Klamath River were undoubtedly destroyed. At present time, conditions in the Klamath River were not likely survivable for the salmon juveniles that were beginning to emerge from the tributary rivers and creeks on their way to the ocean.

There's no way of knowing the survival rate of those juveniles until it's time for them to return to their natal spawning grounds as adults (fall of 2025 for coho salmon; later for Chinook salmon). But there is cause for great concern: by one estimate 26 million cubic yards of sediment is stored

behind the dams.¹ No one knows how much of it will slough off into the river, or how long the river will remain in its turbid state, or how much of the sediment will settle on the river-bottom.

If 10 million cubic yards of sediment were to settle in the river, we'd see the equivalent of six lanes of freeway piled eight feet deep for nearly 100 miles. There are 192 river miles below the lowest dam, Iron Gate. In total, the river is approximately 250 miles long.

For most of February, turbidity levels in the Klamath River hovered around 500 to 1,000 units over a stretch of at least 100 miles, according to U.S. Geological Survey measurements.² These turbidity levels are 10 to 20 times what juvenile salmon can survive, according to a 2001 research report by the University of Washington.³

Coho salmon (a "threatened" species under the Endangered Species Acts) juveniles will begin entering the Klamath in early March. Both coho and Chinook juveniles will continue to out-migrate to the ocean via the Klamath River until early June (timing varies depending on species and tributary).⁴ We can only hope water quality in the Klamath will have improved by then.



The turbid Klamath River on January 30, 2024, about ¼ mile below the mouth of the Scott River and 50 miles below the lowest dam site. Salmon juveniles that leave the refuge of the Scott and Shasta rivers to migrate to the ocean via the Klamath may not survive such turbidity. This includes the ESA-listed coho salmon.

Photo by Mel Fechter



Clear Creek is a tributary that joins the Klamath River near Somes Bar, about 90 miles below the dams. This photo was taken on January 30th, 2024, seven days after the last dam, Copco No.1 was breached. Photo by Mel Fechter



Dead crayfish in the Klamath River about five miles downstream of the now-breached Iron Gate dam, February 11, 2024. Photo by Richard Marshall

But of even greater concern is the “food web,” the millions of organisms in the river that all species rely upon for life. How much of it has been (and will be) destroyed in the Klamath? When will it recover? There may be no food web to support adult salmon returns for many years.

Meanwhile, the small family ranchers and farmers who live along the Scott and Shasta rivers—major tributaries to the mid-Klamath—have reason to be wary of what’s next for them, too.

Don’t misunderstand; the Klamath dams didn’t provide any flood protection or irrigation for farming in the Scott or Shasta valleys. But with the Klamath River transformed to a mudslide, it would be no surprise if government agencies started calling for agriculture in the tributary watersheds to give up water to help flush out sediment and recover salmon and steelhead populations harmed by dam removal.

All it would take is a new special emergency declaration by the governor, and voilà—the state would have authority to revoke privately held water rights in the name of saving fish. It’s been done before.

The current and impending fish die-off—made possible in part by the State Water Resources Control Board and the California Department of Fish & Wildlife—is especially hard to stomach because these same agencies have been severely decreasing local farmers’ water for the past two-and-a-half years, all in the name of “saving” the same fish.

This has been made possible by Governor Newsom’s “emergency drought” proclamation of May 2021. As a result, the State Water Board, on the recommendation of the Department

of Fish & Wildlife, slapped the Scott and Shasta valleys with unprecedented “emergency” regulations restricting both groundwater and surface water. They even limit how much livestock are allowed to drink. The stated reason: To increase streamflow to protect the Chinook salmon, steelhead, and ESA-listed coho salmon.

And the regulations continue into 2024—even though Siskiyou County is officially no longer in drought, and the agencies have produced no proof that the curtailments have done anything to actually help fish.

In 2022, Scott Valley farmers were forced to give up 30% of their irrigation water, allegedly to increase streamflow in the river, thereby (allegedly) helping salmon spawn in the fall/winter of 2022-23. The irrigation cuts, while causing no observable increase in streamflow, did cause extreme hardship in Scott Valley. Similar cuts forced several ranches out of business in Shasta Valley.

And now the progeny of the ’22-’23 salmon spawners, for which farmers have sacrificed so much, may not survive conditions in the Klamath. Who will be held accountable when some or all of those salmon don’t return as adults? Will agriculture again take the blame, and again take cuts due to yet another “emergency”?

Decades before the curtailments, Scott and Shasta valley farmers installed fish screens, voluntarily conserved water, and fenced riparian areas. Whether or not these efforts contributed, the Scott River watershed’s coho population has become one of the largest natural runs in the state over the past 20 years.

Now, agriculture’s efforts have been thrown to the wind by



Project Vicinity Map
Klamath River Renewal Project
www.klamathrenewal.org

KLAMATH RIVER RENEWAL CORPORATION



January 29, 2024. Juvenile salmon and sucker fish are among the fish found dead along the Klamath River. These were found about 40 miles below Iron Gate dam.

Photo by Barbara Geidel

Map of the Klamath River, including the now-breached dams. Note the Shasta and Scott River tributaries mid-way down the Klamath. Farming and ranching communities in the Shasta and Scott watersheds have made massive sacrifices in the name of protecting salmon that are now imperiled by dam removal.

the agencies' irresponsible dam removal methods. Instead of dredging out sediment from behind the dams in advance (a costly endeavor), the agencies decided to "flush" it out via the Klamath River—the salmon's lifeline.

In the interest of protecting agriculture from future scapegoating, we have some questions we want answered by the state agencies, the Klamath River Renewal Corporation (the entity created to remove the dams) and the governor. Publicly. Press releases would be great.

A few of those are:

- What are the effects of the added sediment on aquatic life, particularly coho and Chinook salmon? This should be monitored and reported up and down the Klamath, for as long as high turbidity and excess sediment deposits on the riverbed persist.
- What is the plan to reintroduce salmonids, if brood stocks are destroyed?
- How/where will you get the "flushing flows" needed to flush the remaining fine sediment deposited in the river channel? The Scott River watershed has no reservoirs; our only stored water is the natural snowpack and underground aquifer.
- What chemical constituents are being found in the water

samples, and how are those affecting the ecosystem and river communities? How are you monitoring this over space and time?

“Dead steelhead and other species are floating to the banks.”

When a government gives itself license to harm species and habitat that average citizens would be fined or jailed for harming, that government must be held accountable.

Theodora Johnson is a rancher and founding member of the grassroots communication group, [Scott Valley Agriculture Water Alliance](#), formed in April, 2022. She recommends contacting the Berkeley-based dam removal entity, Klamath River Restoration Corporation, with your questions and concerns. (510) 560-5079 or ren@klamathrenewal.org. Siskiyou County, which was opposed to dam removal, also has helpful info at <https://www.co.siskiyou.ca.us/naturalresources/page/klamath-dam-decommissioning-project>

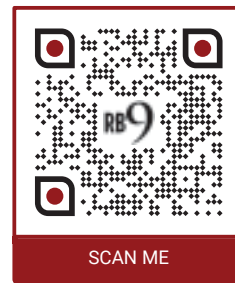
¹Gathard Engineering Consulting. [Klamath River Dam and Sediment Investigation. Technical Report. November 2006.](#)

²U.S. Geological Survey. [National Water Information System: Web Interface. February 19, 2024.](#)

³Bash, Jeff et al. [Effects of Turbidity and Suspended Solids on Salmonids. Final Research Report. University of Washington. 2001.](#)

⁴California Department of Fish and Wildlife. [Scott and Shasta River Juvenile Salmonid Outmigration Monitoring In-Season Update. June 17, 2022.](#)

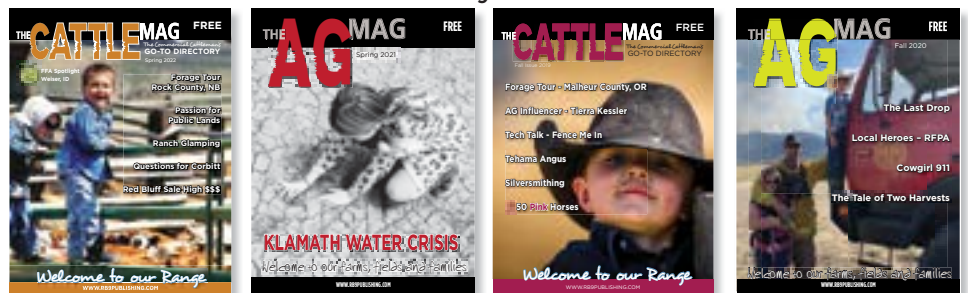
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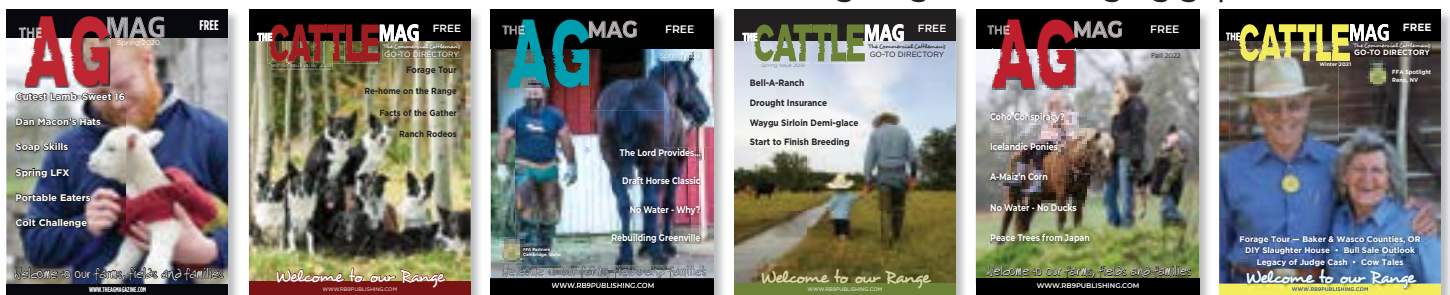
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