



April 2023

FISH TALES

Newsletter of the Golden State Salmon Association

Temperature and Flow Could Plague Salmon Returns in 2023 and 2025



Expected salmon return for 2023 "not good" since spring 2021 outflow conditions were extremely poor.

What really caused the 2023 shutdown? Why are we not fishing this year? A low number of adult salmon that returned to the Sacramento Basin in 2022 is the proximate cause. The deeper story starts with the fact that most of the 2022 adult salmon were fish laid as eggs in the fall of 2019. The number of adult fall-run that returned to spawn in the upper Sacramento River Basin was estimated at 82,500, which is lower than the 2000-2020 average of 146,069 (remember there were big returns in the early 2000s), but not bad by more recent standards.

The eggs hatched out in the winter of 2019/2020. Although there was apparently enough cold water at the time, the egg to fry survival

was very low. It's possible that a lack of vitamin B1 in the parent fish contributed to this. Covid struck in February of 2020, which interfered with collection, so data is not as robust as one might hope for. One thing we can say is that of the fall-run redds monitored by the California Department of Fish and Wildlife for this cohort, over 16% were dewatered by reductions in water released from Shasta Dam while these fertilized eggs were still incubating, leaving them high and dry, and killing them.

Of the eggs that did survive and hatched out to fry, most were lost when they migrated down the Sacramento River in the spring of 2020. There wasn't a lot of water to help them because of

inadequate reservoir releases and/or subsequent downstream diversions, mostly by agriculture. What little water was left turned too hot in April of 2020 and most of the fish out migrating then (which is prime time for fall-run emigration) perished.

During that spring out migration, average flows at a key measuring spot on the mid-Sacramento River (Wilkins Slough, about 40 miles NW of Sacramento) were in the 5,500 cubic feet per second (cfs) range, way below the identified 10,000 cfs flows needed to protect migrating juvenile salmon. Between lousy overall flows and the temperature spike starting in early April, the fish that came downstream disappeared.

By way of contrast, in the wet year of 2019 an estimated 22% of the brood year 2018 juvenile hatchery fall-run salmon released at Red Bluff Diversion Dam in mid- to late-May survived to and through the Delta.

What kind of adult salmon return can we expect in 2023? The answer is probably "not good" since spring 2021 outflow conditions were again extremely poor. The number of fall-run adult salmon that spawned in the fall of 2020, which would

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make up most of those returning this year, was 59,600. Egg to fry survival for brood year 2020 was 8.1%. Again, lack of vitamin B1 probably played a role in depressing survival of eggs and fry. Redd dewatering also played a role with losses of anywhere between 3.2% to over 28% of the redds, depending where in the river they were.

The river warmed a lot from February through mid-April, making it inhospitable to surviving juvenile salmon during the key fall-run outmigration months of April, May and June. In experimental releases of hatchery fish near Red Bluff in April and May of 2021 (when brood year 2020 juveniles would be emigrating), only two of a group of 480 fish released in April made it to Sacramento and only one of those from the May release of 480 made it that far. None of the fish from either release were detected at Benicia in the Delta, meaning the few detected in Sacramento didn't survive much further downstream.

The poor spring out migration flows on the Sacramento were largely a function of how much water reservoir operators chose to hold back and release for agriculture over the summer rather than releasing it to aid the out migration in the spring. It was also affected by how much of the water released in the spring was diverted before reaching the Delta. Topping it off, the state and federal water managers sought and received permission from state authorities to violate salmon protective Delta outflow requirements in June of 2021. The bottom line is there's reason to believe that returns of

fall-run to the upper Sacramento Basin are likely to be poor again this year. Having said that, hatchery returns to the Feather and American River hatcheries might exceed last year's returns to those hatcheries.

The loss of the 2019 and 2020 juvenile salmon was another major downward spike in upper Sacramento Basin salmon productivity. This area once produced a significant percent of the Central Valley fall-run in the recent past. So, too, we lost the native run in the Feather that used to spawn below Thermalito and we've yet to get them back.

Grim note for the future: Water temperatures in the upper Sacramento spawning grounds got really hot in the fall of 2021, averaging 59 degrees and hitting 60 degrees in October and getting as high as 59 degrees in November. In addition, state and federal water managers sought and received permission to violate the salmon protections again, interrupting spring out flow in 2022. This suggests we could see low returns of non-hatchery fall-run fish to the upper river in 2025. ■

**STEP UP FOR
SALMON**

**11th ANNUAL
GSSA SANTA
ROSA DINNER**

**Friday, June 2nd
Friedman Events Center,
Santa Rosa
6pm - 10pm**

**BBQ, open bar,
exciting auction and raffle
prizes, plus great company!**

Join us in Santa Rosa for our Return to Glory dinner. Together we'll celebrate Golden State Salmon Association's mission to restore California salmon for their economic, recreational, commercial, environmental, cultural and health values.

Ticket Prices:
\$100 each, Table for 8- \$750, Table for 10- \$900
After May 1st: \$125 each, Table for 8- \$850, Table for 10- \$1000

**For Tickets visit:
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Closure Produces New Generation of Salmon Spokespersons

One thing that has come from all the publicity surrounding the closure of this year's salmon fishery is a new(ish) group of spokespersons for the salmon industry. Reporting on the pending closure started in mid-March. Charter boat captain Jared Davis guided many reporters through what the closure will mean to those in the charter business. Commercial troller Sarah Bates provided a similar service for the commercial fleet. Seafood buyer and distributor Joe Conte made a strong impression when he spoke at a mid-March press conference organized by Golden State Salmon Association.

After the Pacific Fishery Management Council finalized the closure, the public heard from some of the same speakers joined by some new faces. Ken Elie, owner and founder of the Outdoor Pro Shop, which is the biggest independently owned recreational tackle shop in the west, told reporters about the impacts of the closure on the recreational side of the salmon industry. Seafood buyer/distributor Kenny Belov made a most compelling case for why those who know, and those who care, buy wild caught CA salmon. Fish Emeryville owner Andy Guiliano rounded out the picture by relaying how the closure will affect his part of the recreational industry and the 16 charter boats that run out of the Emeryville Marina. Although it was all grim news, it was heartening to see new faces and very eloquent speakers rise to help educate the public about one

of our shared, precious salmon resources under assault. It is critical that we strengthen our voice for salmon, and devote a little space to sharing some of the memorable thoughts these new leaders shared. ■

Sarah Bates, Commercial Salmon Troller



Sarah Bates, Commercial Salmon Troller

Normally, the first week of April at Pier 45 (SF) is really bustling. The recreational season should be open. We should be getting the first reports from the charter boats and the private skiffs fishing in our local waters, bringing fish home to feed their families. We should be checking our anchor winches, putting on new hydraulic hoses, we should be tying leaders. We should be checking the weather. We should be putting fuel and ice on the boat so that we can go out on our first trip, south to Monterey Bay or out to the Farallon Islands. We should be bringing salmon back to San Francisco to your restaurants and your tables. But instead, we have a complete closure of all salmon fishing, recreational and commercial, in the entire state of California.

These salmon are resilient. They've been swimming through the Golden Gate for millions of years. They've been coming up these

rivers for about as long as human beings have been walking on two legs. They've survived landslides, they've survived huge droughts, they've survived temperatures changes, they've survived changing ocean conditions, they've survived rivers that have changed course. What they can't survive is some of the water management policies that are putting their breeding habitat at risk. ■

Kenny Belov, Salmon Buyer and Distributor



Owner Two X Sea

The loss of the 2023 salmon season is going to be devastating, it's going to be painful financially. As a culinary professional, as a fish buyer, as a fish monger, it's going to be hard to recover from the loss of that single species.

We have a saying, in our business, that seafood without a story is flavorless, and that flavor comes from the people that bring us the local fish that we can serve – the party boat and the sport boat captains who take us out to create memories that will last a lifetime. Without those individuals, we serve flavorless seafood, and I refuse to serve flavorless seafood. ■

Ken Elie, Owner, Outdoor Pro Shop

I'm the owner of Outdoor Pro Shop and three other related businesses that all sell salmon gear.

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Ken Elie, Outdoor Pro Shop

Until recently, I had 39 employees. I am the largest independent fishing tackle dealer west of the Mississippi, but we've already had to lay off 10 people and probably going to have to lay off more. Salmon, sales and related accessories amount to about 40% of our annual sales... so my sales will be down 40% this year. I will lose multiple seven figures. Of the 39 that I had, about half of them have family and dependents that rely on my employees to bring home the paychecks to support them.

The salmon season closure doesn't

just affect people like me, it affects everybody in the fishing tackle industry through license sales, lost boat sales, lost fuel sales, mechanics, hospitality industry, travel, industry, automobile and truck sales... commercial as well as recreation anglers will be suffering. The list is long and far-reaching. ■

Andy Guiliano, Fish Emeryville Boat Charters and Tackle

We've been in business since 1972, continuously for 51 years. We carry approximately 20,000 people out into the ocean to fish for a variety of fish, but there's no doubt the king salmon is the dominant fish and represents about 40% of our annual income. The loss of the 2023 salmon season will be devastating to boat owners, to



Andy Guiliano, Fish Emeryville

crewmembers, and to their families. Much like Covid, there will not be people who make it to the end of this disaster. Our industry will be stress tested again. In some cases, we're a throwback industry. We don't have any aspirations to work from home. Remote working means traveling up and down the coast looking for salmon and for crab. The apps on our phones are weather forecasts, buoy reports, and tides and currents. However, we're the epitome of California small businesses. We live locally, we buy locally, and we spend locally. ■

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