GOLDEN STATE SALMON ASSOCIATION

Central Valley Salmon

Emergency State Recommendations

Central Valley Salmon Emergency Recommendations
Actions Needed at the State Level

Summary: GSSA recommends the following actions at the state level in response to the current salmon crisis and the statewide closure of the 2023 salmon fishing season:

1. **Set Temperature and Flow Standards**: The State Water Board must adopt and enforce specific, science-based and legally enforceable flow requirements for the Bay-Delta and its tributary salmon rivers, as well as requirements to ensure safe temperatures for salmon below Shasta Dam on the Sacramento River.
2. **Stop Waiving Standards**: State agencies should stop allowing water agencies to violate state flow requirements to protect Central Valley salmon runs.
3. **Stop Issuing New Bay-Delta Water Rights**: The State Water Board should stop issuing new water rights to divert more water from the Bay-Delta system, until new flow standards are set and enforced and salmon and other species are recovering. This should start with passing SB 687 (Eggman).
4. **Renegotiate Antiquated Water Contracts**: The State should renegotiate, and require the Bureau of Reclamation to renegotiate, sweetheart water deals with senior water users that give a handful of agricultural water agencies abundant water supplies in dry years, at the expense of urban residents, other farmers, salmon and the Bay-Delta ecosystem.
5. **Improve Temperature Conditions on the Feather River**: The Department of Water Resources should implement interim actions on the Feather River to improve temperature conditions for fall run and spring run Chinook salmon and steelhead.
6. **Expand Access to Cold Water Habitat**: The State should take action in the following areas to dramatically increase the access salmon have to high-quality cold water foothill habitat.
    a. The California Public Utilities Commission should deny PG&E's request to transfer partial ownership of its hydroelectric facilities until salmon restoration is completed on the Eel River, the Feather River, Battle Creek, Butte Creek, Cow Creek, and other streams.
    b. CDFW should join the National Marine Fisheries Service in asking the Federal Energy Regulatory Commission to reopen the current PG&E Battle Creek license to require interim actions, including operating completed fish ladders to allow salmon to pass upstream.
    c. CDFW should work with the Solano County Water Agency and stakeholders to eliminate the salmon migration barrier caused by Los Rios Check Dam on Putah Creek ASAP, and set the stage for long-term restoration.
    d. The State legislature should include $250 million for Chinook salmon climate resiliency (e.g. temperature improvements and improving access to cold water climate refugia) in a natural resources and water bond.

GOLDEN STATE SALMON

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Background

Following extraordinarily low Central Valley adult spawning salmon populations in 2022 and a very low 2023 estimate of the adult salmon population in the ocean, the 2023 salmon fishing season in California and along the Oregon coast has been closed. That closure will cause devastating economic impacts – and requires emergency action at the state and federal level to rebuild salmon runs.

In the spring of 2022, the Pacific Fisheries Management Council set a goal of 180,000 adult spawning Sacramento River Basin fall run Chinook salmon for 2022. However, the final count for the year was only 61,850 fall run – barely a third of the goal. Populations of the ESA listed Central Valley winter run and spring run Chinook salmon were also at dangerously low levels – 6,038 and 6,245 respectively. Sacramento Basin salmon runs are the backbone of the California and Coastal Oregon salmon fishery. Sacramento fall run Chinook salmon populations have fallen every year since 2019. The 2023 Sacramento River fall run population forecast is only 169,800 adult fish – a level too low to sustain a fishing season.

By way of contrast, a decade ago, in 2013, the Sacramento fall run population was over 800,000 fish. 0ver 400,000 of those fish were caught - and still the Sacramento fall run count was 406,800 spawning fish. The wild Central Valley adult salmon population goal under state law and the State Board's Bay-Delta Plan is approximately 1,000,000 fish.

When salmon runs are healthy, the California salmon fishing industry supports 23,000 jobs and $1.4 billion in annual economic activity along the California coast, in the Bay Area and along California's inland salmon rivers. This is only the second time in State history that the salmon season has been closed. (The only other closure was 2008-2009) This closure will ripple through salmon families and communities. Fishermen will lose their boats and possibly their homes. The loss of fishing will hurt marinas, fish brokers, restaurants, motels, boat retailers, boatyards, fishing equipment manufacturers and retailers. Most California salmon fishermen are small family businesses. This closure will have terrible impacts on those families – as well as on fishing communities reaching from Morro Bay and the Bay Area to coastal Oregon.

The salmon emergency in 2023, like the closure in 2008-2009, is the result of poor water management during a drought.

In 2019, the Trump Administration gutted ESA rules to protect listed Central Valley salmon runs. That plan literally authorized the extinction of winter run salmon. That plan is still largely being implemented today. California Department of Fish and Wildlife requirements under the California Endangered Species Act embrace most of the Trump Administration's approach. Meanwhile, the State Water Resources Control Board has failed to set and implement new Bay-Delta flow standards to protect salmon. The Board has also failed to stop the Bureau of Reclamation from draining the cold water from Shasta Dam, resulting in lethal Sacramento River water temperatures that kill salmon eggs before they hatch. In

recent years, both CDFW and the State Board have also waived flow requirements to protect salmon.

Droughts have always caused some impacts on California salmon runs. However, salmon survived droughts for millennia and remained abundant. The core of the crisis Central Valley salmon and the fishing economy face today is how we manage our water resources. This mismanagement has turned our rivers into death traps for salmon.

These recommendations for action at the state level are focused on the cause of the current salmon collapse – lethally low river flows and high water temperatures. Over the long-term, other actions will be required to restore fully healthy salmon runs. In the short-term, however, we must stop killing the wild salmon in Central Valley rivers through inadequate flow and temperature conditions.

Recommendations for Action at the State Level

1. **Adopt and Enforce State Bay-Delta Flow and Temperature Requirements to Protect Salmon**: The State Water Board must adopt and enforce specific, science-based and legally enforceable flow requirements for the Bay-Delta and its tributary salmon rivers, as well as requirements to ensure safe temperatures for salmon below Shasta Dam on the Sacramento River.

Action Needed By: Governor Newsom, State Water Resources Control Board.

Background – Temperature Requirements: In the National Marine Fisheries Service's 2019 ESA biological opinion for Central Valley salmon, the Trump Administration eliminated specific and enforceable temperature protection requirements for the Sacramento River below Shasta Dam. The biological opinion allowed the Bureau of Reclamation to drain cold water from Lake Shasta and kill 100 percent of listed Sacramento River winter run Chinook salmon for three consecutive years. This essentially authorized extinction for this salmon run. This decision allowed the Bureau to increase summer agricultural water deliveries, draining cold water from Lake Shasta. This results in high river temperatures during the fall salmon spawning season that can kill salmon eggs before they have a chance to hatch. Unfortunately, the State Water Board has failed to step in to use state law to force the Bureau of Reclamation to retain enough cold water in Lake Shasta to keep salmon eggs and juvenile salmon alive. In 2021, temperature pollution killed 23 million Sacramento River winter run eggs – 75% of all of the winter run eggs that year. Even worse, that year more than 99 percent of winter run salmon, which are listed under the federal ESA and California ESA, died before they reached the Delta – where even more of them were killed. Similar losses have been experienced in the Sacramento River's wild fall run salmon population. As a result of this state failure, wild salmon in the Sacramento River – the most important salmon river in the state – have been devastated. State law requires the State Board to stop these fish kills. In fact, state law and the State Board's Bay-Delta Plan require Central Valley wild adult salmon production to reach approximately 1,000,000 fish. The State Water Board must set and enforce science-based temperature requirements, including carry over storage, to protect salmon on the Sacramento River.

Background – Flow Requirements: The current State Water Board flow standards for salmon and the Bay-Delta ecosystem were adopted in 1995. After 28 years, it is clear that these standards have failed and that dramatically stronger flow requirements are needed. At the end of Governor Brown's term, the State Board adopted stronger flow requirements for the San Joaquin River and its tributaries. At the start of his term in 2019, Governor Newsom replaced the chair of the State Board at the request of powerful agricultural water users that had sued to block stronger State Board flow requirements. Since then, Governor Newsom has blocked the State Board's efforts to set and enforce new flow standards. Instead, he has supported a "voluntary agreement" process run by a handful of water users – and excluding environmental, fishing, tribal and environmental justice interests. After years of work, the "VA" process has failed to produce a complete and credible package. VA proposals to date ignore temperature pollution problems and do virtually nothing to protect salmon, particularly during the driest years. Governor Newsom should stop blocking action by the State Water Board to update the Bay-Delta Plan's water flow requirements to protect salmon and the Bay-Delta ecosystem.

By lowering Sacramento River water releases in the fall, after the summer irrigation season ends and after winter run salmon have hatched and left their gravel nests, the Bureau of Reclamation frequently dewaters large numbers of fall run redds or nests. This dewatering leaves these salmon nests – full of eggs and newly hatched baby salmon – high and dry, killing all of these fish. The State Board should set new flow standards to reduce the dewatering of Sacramento River fall run salmon redds.

2. **Stop Waiving State River Flow Requirements to Protect Salmon**: State Agencies should stop allowing water agencies to violate state flow requirements to protect Central Valley salmon runs.

Action Needed By: Governor Newsom, State Water Resources Control Board, California Department of Fish and Wildlife.

Background: During his time in office, Governor Newsom has issued multiple executive orders directing agencies to consider waiving state protections for Bay-Delta salmon, and other environmental protections for the largest estuary on the West Coast. During Mr. Newsom's time in office, the State Water Resources Control Board has allowed water agencies to violate flow requirements in 2021, 2022 and 2023. Governor Newsom's February 13, 2023 executive order modified his previous drought executive order to allow the State Board to waive protections for salmon even during wet periods – not in response to a drought emergency - but merely to increase water deliveries. This decision was made despite extraordinarily low salmon counts in the fall of 2022 and the impending closure of the salmon fishing season. The California Department of Fish and Game has waived protections under the California Endangered Species many times – including in 2021 and 2022.

3. **Stop Issuing Water Rights to Divert More Water Needed by Salmon**: The State Water Board should stop issuing new water rights to divert more water from the Bay-Delta

system until new flow standards are set and enforced (see recommendation #1) and salmon and other species are on track to recover.

Action Needed By: State Water Resources Control Board.

Background: According to the University of California, the State Water Resources Control Board has already issued water rights for far more water than exists in the Bay-Delta watershed[1]. State-wide, water rights total more than five times average statewide water flows. On the San Joaquin River, total water rights amount to more than eight times average annual river flows – making it the most overallocated river in the state. The overallocation of Central Valley rivers is one of the major causes of salmon decline. Yet water users are seeking more new water rights associated with proposed facilities such as the Delta tunnel and Sites Reservoir. Granting new water rights and diversions for these projects could damage salmon runs further. In fact, it is clear that we must reduce current diversions from salmon streams in the Bay-Delta watershed. Until new science-based Bay-Delta flow requirements are set and enforced in the Bay-Delta watershed and salmon runs are recovering, the State Board should stop issuing new water rights that exacerbate the existing salmon crisis.

Senator Susan Eggman has introduced SB 687, which would delay permitting and new water rights for a new Delta tunnel until the Bay-Delta Water Quality Control Plan is updated. The legislature should pass SB 687.

4. **Reform Antiquated Sweetheart Water Deals**: The state should renegotiate, and require the Bureau of Reclamation to renegotiate, sweetheart water deals that give a handful of agricultural water agencies abundant water supplies in dry years, at the expense of urban residents, other farmers, salmon and the Bay-Delta ecosystem.

Action Needed By: Department of Water Resources, State Water Resources Control Board.

Background: More than a half century ago, the Bureau of Reclamation and the Department of Water Resources cut a series of sweetheart deals with senior water users prior to the construction of Shasta, Oroville and Friant Dams. These agreements were intended to ensure that the water rights of senior water users were respected after these dams were constructed. However, in reality, these contracts guaranteed far more water than these water agencies had rights to. Together, these contracts total nearly 4 million acre-feet of water – enough water to meet the needs of eight cities the size of Los Angeles, or 30 million California residents.

During the recent drought, these water deals resulted in deliveries to these water users that exceeded the entire natural flow of the Sacramento, Feather and San Joaquin Rivers[2]. These deliveries played a major role in draining the cold water behind Shasta Dam and

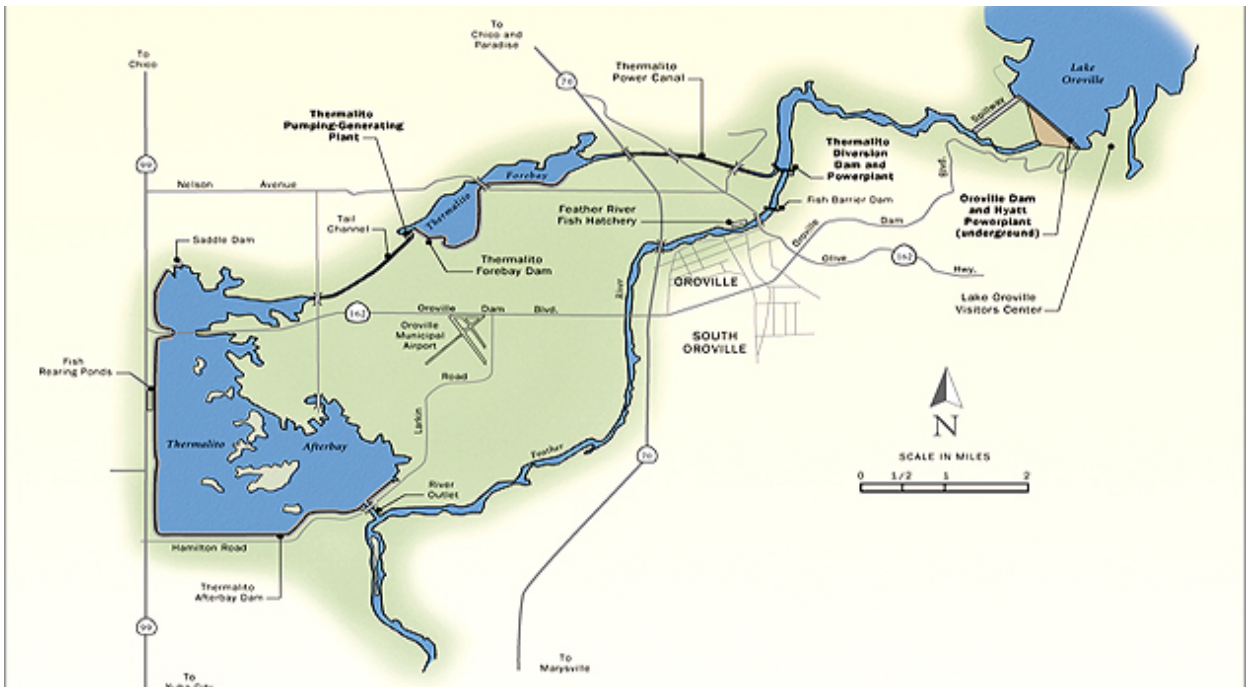
[1] https://iopscience.iop.org/article/10.1088/1748-9326/9/8/084012
[2] https://www.nrdc.org/bio/doug-obegi/whos-getting-unreasonable-water-allocations-ca

destroying salmon runs. They also reduce water supplies for California cities and other farmers.

During 2022, a short-term deal was reached to pay the Bureau's Sacramento River Settlement Contractors to take less water under their contract. However, on February 15 2023, the Department of Water Resources announced that it is planning to make full deliveries to their senior contractors on the Feather River. And on February 22, 2023, the Bureau announced 100% deliveries to their Sacramento River Settlement Contractors and the San Joaquin Valley Exchange Contractors. These announcements came only days after Governor Newsom's decision to waive protections for salmon.

<u>The Department of Water Resources should renegotiate their half-century old agreement with Feather River water users. The State Water Board should exercise their water rights authority to require both DWR and the Bureau of Reclamation to renegotiate these old agreements.</u> Those contracts should be modified to reduce impacts on salmon and stop guaranteeing water delivery levels that exceed senior water rights and undermine water supplies for others.

5. **Implement Interim Temperature Protections on the Feather River**: The Department of Water Resources should implement interim actions on the Feather River to improve temperature conditions for fall run and spring run Chinook salmon and steelhead.



<u>Action Needed By</u>: Department of Water Resources

<u>Background</u>: Thermalito Afterbay is a reservoir built by the Department of Water Resources in the 1960s as a part of the State Water Project's Oroville Dam project on the

Feather River. The Afterbay is an off-stream reservoir that is fed by the Thermalito power canal, which runs parallel to the Feather River. A hydroelectric generating facility produces electricity from the water running through the Thermalito power canal before it reaches the Afterbay. DWR releases water from Oroville to maximize power generation and uses the Afterbay to "re-regulate" flows released into the Feather River from the Afterbay to maintain steady downstream flows for water users and the ecosystem.

The Feather River "low flow channel" (LFC) extends from Lake Oroville to the outlet of Thermalito Afterbay. However, most of the water released into the Feather River by DWR is released from the Afterbay – bypassing the LFC. The Afterbay outlet marks the start of the Feather River "high flow channel" (HFC).

The Afterbay is large and shallow. As a result of the Afterbay design and the high temperatures in the Valley for much of the year, water released from the Afterbay is dramatically warmer than water released from Oroville Dam. That warm water benefits the rice industry, which diverts water from the Afterbay. However, warm water can be lethal for salmon and other species below the Afterbay outlet. More than half of the spawning habitat on the Feather River is in the temperature-impaired HFC below the Afterbay outlet. Fisheries agencies have concluded that temperature pollution frequently eliminates the HFC as viable fall run Chinook salmon spawning habitat. High temperatures also harm spring run salmon, steelhead and green sturgeon – all ESA listed species.

DWR has completed studies to identify the best project to retrofit the Thermalito Afterbay to eliminate this temperature pollution. Unfortunately, DWR believes they cannot build that retrofit until the Federal Energy Regulatory Commission issues a new license for Oroville Dam and related facilities, including the Afterbay. That license may not be issued for years.

Until the Afterbay is retrofitted, DWR should take interim action to restore healthy temperatures in the HFC. This could be done by reducing water releases from the Thermalito Afterbay during the salmon spawning season and correspondingly increasing releases from Oroville Dam to the LFC. This interim action would not modify Oroville water storage levels, Oroville Dam hydropower generation or State Water Project water deliveries. It would, however, modestly reduce power generation at the Thermalito powerhouse. Fortunately, given the record 2023 snowpack, California will have abundant hydropower resources this year – making this request very implementable. This interim action would only be required from the beginning of the spawning season until air and water temperatures drop in the fall.

At several times in the past, DWR has voluntarily increased flows in the LFC. In some years, flow has been increased to provide attraction flows to draw spring run Chinook salmon to the Oroville Hatchery. LFC flows were also increased when the Thermalito powerplant was offline for repairs after a fire.

6. **Expand Access to Cold Water Habitat by Making Progress on Gridlocked Salmon Projects**. The following recommendations could dramatically increase the access salmon have to high-quality cold water foothill habitat.

a. The California Public Utilities Commission should deny PG&E's request to transfer partial ownership of its hydroelectric facilities until salmon restoration is completed on the Eel River, the Feather River, Battle Creek, Butte Creek, Cow Creek, and other streams where the utility's facilities harm salmon.
b. CDFW should join the National Marine Fisheries Service in asking the Federal Energy Regulatory Commission to reopen the current PG&E Battle Creek FERC license to require interim fish protection measures, including operating completed fish ladders to allow salmon to pass upstream.
c. CDFW should work with the Solano County Water Agency and stakeholders to eliminate the salmon migration barrier caused by the Los Rios Check Dam on Putah Creek as soon as possible, and set the stage for long-term restoration.
d. The State legislature should include $250 million for Chinook salmon climate resiliency (e.g. temperature improvements and improving access to cold water habitat) in a natural resources and water bond.

Action Needed By: California Public Utilities Commission, California Department of Fish and Game, the State legislature.

Background – PG&E: California rivers are blocked by approximately 1,400 dams. Many of these are small and antiquated. Some of them are badly designed, dilapidated or no longer needed. The Pacific Gas and Electric Company has decided that some of their hydroelectric facilities, including on the Eel River, Battle Creek and Cow Creek, are no longer cost effective to maintain and operate. These facilities – and several others – prevent salmon from accessing cold water habitat in the Coast Range and Central Valley foothills. PG&E has a legal responsibility to remove these unneeded dams, creating an opportunity for a dramatic expansion of cold-water habitat – with potential benefits for many Chinook salmon and steelhead runs.

Unfortunately, progress on these restoration projects has been gridlocked for years. For example, a modest 1999 agreement to remove some dams and build fish ladders on other dams on Battle Creek has not been fully implemented after nearly a quarter century – despite the expenditure of over $100 million in state funds. In fact, two completed fish ladders on Battle Creek dams are still not operated – meaning that salmon are not allowed to use these fish ladders to reach high quality upstream habitat.

In the near-term, salmon should be allowed to use the Battle Creek fish ladders. This could be accelerated if CDFW and NMFS were to ask FERC to reopen the existing PG&E license for these facilities. PG&E, CDFW and stakeholders should also move as rapidly as possible to remove all of the PG&E dams in the Battle Creek watershed.

Needed dam removal and restoration has also been delayed on the Eel River and Cow Creek.

In September of 2022, PG&E proposed to transfer partial ownership of its hydropower assets, including the facilities discussed above, to a partially owned new subsidiary. This transfer raises a number of key questions related to PG&E's ongoing impacts on rivers and salmon. These questions include:

- Would the new hydropower entity have the staff expertise to plan and implement complex dam removal and river restoration projects?
- Would the new entity have the capacity to finance dam removal and river restoration?
- Would that new entity make river restoration a priority?
- Would the transfer affect PG&E's current legal liability to resolve these salmon issues?
- What liability would the new outside owners bear?
- Would river restoration be further delayed?

The California Public Utilities Commission should not allow this proposed transfer to take place until needed salmon restoration actions are completed on the streams mentioned above.

Background – Putah Creek: Decades ago, the State of California built a small check dam on Putah Creek to provide water for the Vic Fazio Wildlife Area and for neighboring farms. This dam is operated by adding and removing flashboards to raise the water level in the creek to create a small diversion pool. In some years, these flashboards are in place during the salmon migration season, blocking access to spawning habitat on Putah Creek. In November of 2021, pre-spawning adults that were prevented from completing their migration died in a fish kill caused by low dissolved oxygen conditions below the check dam. The best partial, short-term solution is to build a quarter mile long bypass channel on the north side of the existing creek channel to allow salmon to swim around the check dam. In the longer-term, a more ambitious restoration project, including extensive new juvenile rearing habitat, should be built on the south side of the existing channel.

April 18, 2023