State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
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PROTEST – (Petitions)
OBJECTION
PETITION FOR RECONSIDERATION

Temporary Urgency Change Petition and Responding Order for Permits 16478, 16479, 16481, 16482 and 16483 (Applications 5630, 14443, 14445A, 17512 and 17514A, respectively) of the Department of Water Resources for the State Water Project and License 1986 and Permits 11315, 11316, 11885, 11886, 11887, 11967, 11968, 11969, 11970, 11971, 11972, 11973, 12364, 12721, 12722, 12723, 12725, 12726, 12727, 12860, 15735, 16597, 20245, and 16600 (Applications 23, 234, 1465, 5638, 13370, 13371, 5628, 15374, 15375, 15376, 16767, 16768, 17374, 17376, 5626, 9363, 9364, 9366, 9367, 9368, 15764, 22316, 14858A, 14858B, and 19304, respectively) of the United States Bureau of Reclamation for the Central Valley Project.

We, Bill Jennings, Executive Director, California Sportfishing Protection Alliance (CSPA), 3536 Rainier Ave, Stockton CA 95204, deltakeep@me.com, (209) 464-5067; Chris Shutes, Water Rights Advocate, CSPA, 1608 Francisco St., Berkeley, CA 94703, blancapaloma@msn.com, (510) 421-2405; Barbara Vlamis, Executive Director, AquAlliance, P.O. Box 4024, Chico, CA 95927, barbarav@aqualliance.net, (530) 895-9420; Carolee Krieger, Executive Director, California Water Impact Network (CWIN), 808 Romero Canyon Rd., Santa Barbara, CA 93108, caroleekrieger7@gmail.com, (805) 969-0824; and Michael Jackson, counsel to CSPA, CWIN and AquAlliance, P.O. Box 207, 429 W. Main St., Quincy, CA 95971, mjatty@sbcglobal.net, (530) 283-0712 (Protestants)

have read carefully an amended notice relative to a petition for Temporary Urgency Change (TUCP) of the Department of Water Resources (DWR) and the Bureau of Reclamation (Reclamation or USBR), dated May 19, 2021 for the above-cited water rights licenses and permits. We have also carefully read the State Water Resources Control Board's (State Water Board or SWRCB) June 1, 2021 Order conditionally approving the TUCP (Order or TUCO).

The proposed TUCP and the State Water Board's Order will:

- Not be within the State Water Resources Control Board's jurisdiction,
- Not best serve the public interest,
- Be contrary to law, and
- Have an adverse environmental impact.

We protest and object to the TUCP. In addition, we petition for reconsideration of the Order conditionally granting the TUCP. **We state the facts that support our allegations, our reasons for the objection, our terms for withdrawing the objection, and the grounds for our petition for reconsideration in the attached document entitled "Protest, Objection, and Petition for Reconsideration of CSPA et al."**

A true copy of this protest has been served upon the petitioners by e-mail (see below).

Date: June 4, 2021

Bill Jennings, Executive Director
California Sportfishing Protection Alliance

Chris Shutes, Water Rights Advocate
California Sportfishing Protection Alliance

Barbara Vlamis, Executive Director
AquAlliance

Carolee Krieger, Executive Director
California Water Impact Network

Michael Jackson
Counsel to California Sportfishing Protection Alliance,
AquAlliance, and
California Water Impact Network

/s/ Michael Jackson

We have filed this protest with: Erin.Foresman@waterboards.ca.gov and Chris.Carr@waterboards.ca.gov

Pursuant to requirements that all protests must be served on the petitioner, we have filed this protest and objection via e-mail to:

Department of Water Resources, c/o James Mizell: James.Mizell@water.ca.gov

Regional Solicitor's Office, c/o Amy Aufdemberge: Amy.Aufdemberge@sol.doi.gov

Bureau of Reclamation, c/o Kristin White: knwhite@usbr.gov

PROTEST, OBJECTION, AND PETITION FOR RECONSIDERATION OF CSPA ET AL.

The California Sportfishing Protection Alliance, California Water Impact Network, and AquAlliance (collectively, CSPA et al.) protest and object to the Temporary Urgency Change Petition (TUCP) of the Department of Water Resources (DWR) and the Bureau of Reclamation (Reclamation) relative to the 2021 operation of the State Water Project (SWP) and the Central Valley Project (CVP; collectively, the Projects), with the license, permit and application numbers cited above. CSPA et al. also petitions for reconsideration of the State Water Resources Control Board's (State Water Board) June 1, 2021 Order conditionally approving the TUCP.

We were here before in 2014 and 2015, and we are sickened to be here again. As in 2014 and 2015, the crisis facing the fisheries and ecosystems of the Central Valley, and the Trinity River and lower Klamath River watersheds, was predictable and entirely avoidable. Between them, the Projects delivered too much water in 2020. Reclamation delivered too much water in April and May of 2021. Reclamation's official policy of "maximizing deliveries," enshrined in the 2019 Biological Opinion for the long-term operation of the Projects, showed its recklessness in its first full year of implementation. The disastrous 2018 renegotiation of the Coordinated Operations Agreement (COA) between the Projects severely depleted DWR's storage in Oroville after a single dry year.

In the summer of 2020, Reclamation stonewalled the State Water Board in efforts to set up new defaults for water temperature management of the CVP's Shasta-Trinity Division. DWR and Reclamation dragged their way through the spring of 2021. The State Water Board, which needed a comprehensive approach to management of the Projects by April 1, still doesn't have a plan on June 1. Now DWR and Reclamation cry crisis, promoting collective amnesia of Project mismanagement and overallocation, and deflecting all attention to the here and now.

We incorporate by reference the following documents that CSPA et al. and others have submitted to the State Water Board in 2021:

A. Letter from NRDC et al. requesting immediate enforcement of Water Rights Order 90-05 (March 12, 2021): https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/wro90/2021-03-12_ngo_letter_to_swrcb_re_90-5_and_tucps.pdf;
B. Letter from CSPA et al. requesting immediate enforcement of Water Rights Order 90-05 (March 14, 2021): https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/wro90/2021-03-14_cspa_et_al_request_swrcb.pdf
C. CSPA et al. letter commenting on Sacramento River water temperature management (April 14, 2021): https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/wro90/2021-04-15_cspa_et_al_comments_on_2021_sac_riv_temp_mgmt.pdf;
D. Save California Salmon letter commenting on Sacramento River water temperature management (April 14, 2021):

https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/wro90/2021-04-15_scs_comment_on_2021_sac_riv_temp_mgmt.pdf;

E. CSPA et al. presentation to State Water Board, April 17, 2021: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/wro90/2021-04-21_item_10_cspa_jennings_cannon_st_bd_wkshop_april2021.pdf;
F. CSPA et al. letter requesting immediate enforcement of D-1641 Vernalis pulse flows (April 25, 2021): https://calsport.org/news/wp-content/uploads/CSPA-et-al-ltr-to-Esquivel-re-2021-New-Melones-Ops.042521.pdf;
G. CSPA et al. Alternative Temperature Management Plan for the Shasta-Trinity Division of the CVP and supporting documents: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/cspa_et_al_cvr_ltr_esquivel_re_proposed_cspa_tmp_2021_052321.pdf; https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/cspa_tmp_052321.pdf; https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/cspa_tmp_spreadsheet_052321.pdf; https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/cspa_tmp_spreadsheet_052321.xlsx

We also incorporate the Settlement Agreement between CSPA et al. and the State Water Board (July 17, 2021): https://calsport.org/news/wp-content/uploads/2020.07.17-CSPA-v.-SWRCB-Settlement-Fully-Executed-1.pdf

I. Summary of Requests in TUCP

The TUCP proposes:

- June 1 through June 30: Reduce net delta outflow index (NDOI) requirements for salinity control from 4,000 cubic feet per second (cfs) to 3,000 cfs on a 14-day running average
- July 1 through July 31: Reduce NDOI requirements for salinity control from 4,000 cfs to 3,000 cfs on a monthly average. D-1641, Table 3, footnote 8 remains applicable
- June 1 through July 31: Cap the combined SWP and CVP exports at 1,500 cfs when Delta outflow is less than 4,000 cfs. SWP and CVP exports may exceed 1,500 cfs when Delta outflow meets D-1641 or for moving transfer water (after July 1)
- June 1 through August 15: Relocate the Western Delta Agriculture compliance point from Emmaton to Threemile Slough.

In addition, the TUCP is specifically assumes a plan to install a temporary barrier at False River in order to maintain sufficient compliance with outflow and salinity requirements.[1]

1 See TUCP, Att. 1, p. 6

II. Stated Rationale in the TUCP, and Response of CSPA et al.

The TUCP provides poorly founded justification for the requested changes and mischaracterizes the TUCP's prospective benefits. For the reasons that CSPA et al. describe below, the TUCP is not warranted. The State Water Board should reverse its approval of the TUCP and order the remedies stated at the conclusion of this objection.

A. The Projects and the State Water Board Have Been Negligent, Not Diligent.

The TUCP states that the State Water Board should grant the TUCP because the Projects have exercised "due diligence:"

> Reclamation and DWR have exercised due diligence to avoid the circumstance necessitating this request by beginning this year with relatively high carryover storage after the dry year of 2020. Storage conservation measures in the beginning of water year 2021 helped to meet D-1641 requirements through the winter and early spring. In addition, the Projects exercised due diligence by both initially issuing very low allocations to its water supply contractors and then later further reducing allocations, when the worsening severe dry pattern began to emerge.[2]

The actions of DWR and Reclamation in April and May, 2021, tell a much different story. In complete denial of the trends of declining inflow, the Projects persisted in using 90% exceedance modeling in their runoff estimations.[3] And Reclamation, in April and May, released far more water from Shasta Reservoir than it did in 2014 and 2015 (Figure 1).

[2] TUCP, Att. 1, p. 9.
[3] *See* Reclamation, Shasta Temperature Management Plan, May 5, 2021, Atts. 1-5: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/Attachments%201%20to%205.pdf.

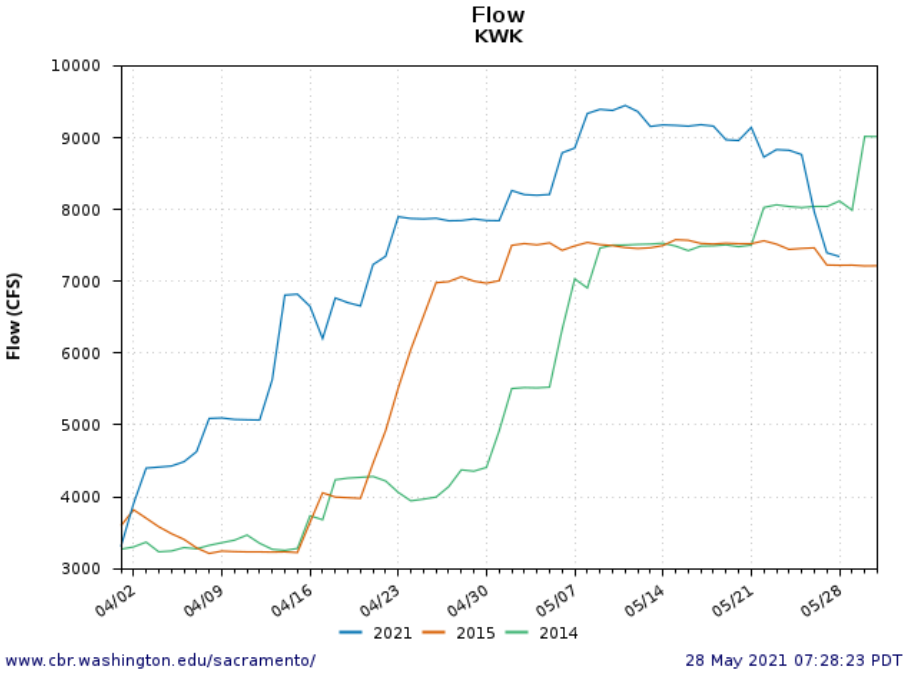

Figure 1. Keswick Reservoir April-May release, 2014, 2015, 2021

Reclamation made its April and May releases in spite of the fact that storage in Shasta was less in April and May 2021 than in 2014 and 2015 (Figure 2).

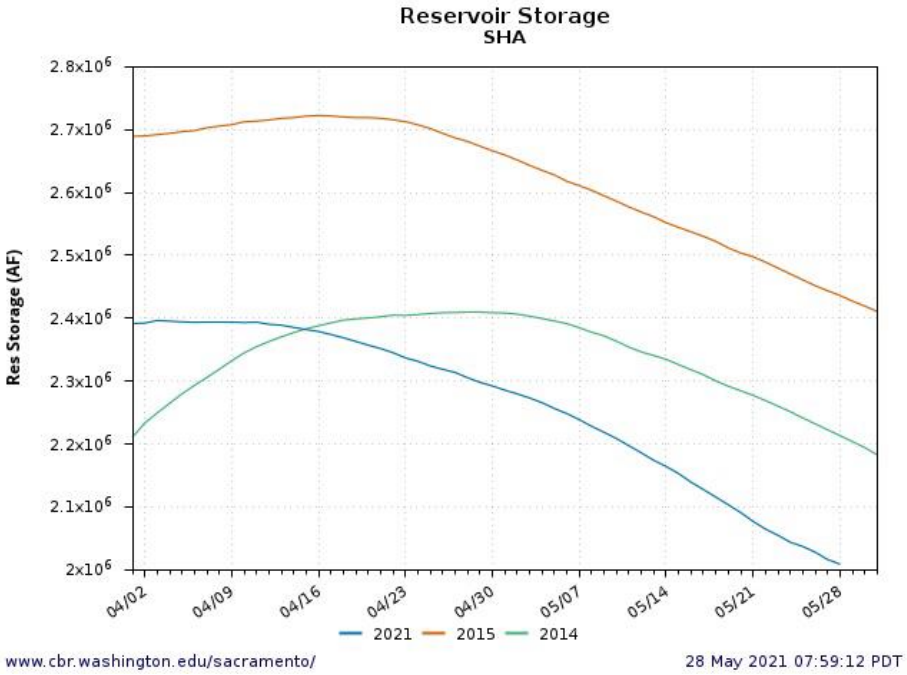

Figure 2. Shasta Reservoir storage, 2014, 2015, 2021

Reclamation's reckless release of water from Shasta storage in April and May 2021 severely circumscribed options for water management throughout the SWP and CVP system in the remainder of 2021. It was only diligent in the sense that it diligently delivered water to Sacramento River Settlement Contractors in excess of reductions that would have allowed DWR and Reclamation to meet their regulatory requirements, in the Delta and in the Sacramento and Trinity rivers. Reclamation's April and May releases from storage in Shasta Reservoir made the present TUCP a foregone conclusion. The State Water Board had every opportunity to put a stop to these excessive releases. CSPA et al., NRDC and associated organizations, and CSPA et al. put the State Water Board on notice as early as March 12 and March 14 of the urgent need to hold storage in Shasta Reservoir.[4]

On March 8, 2021, CSPA began a series of posts on its California Fisheries Blog about the National Marine Fisheries Service's summary of lessons learned from Sacramento River water management in 2014 and 2015.[5] Following NMFS' published conclusions, that first post made abundantly clear that the most important lesson from 2014 and 2015 was for the State Water Board to make protective decisions on Sacramento River temperature management in early April.[6] The second post concluded: "The Ides of March have passed, and there is every sign that the State Water Board will for a second straight year allow Reclamation to once again defy Lesson #1: Keswick releases need to be decided by April 15."[7]

There was no shortage of information on the need for the Board to act to limit releases from Shasta Reservoir in April 2021. Reclamation was not diligent. On the contrary, Reclamation negligently released too much water from Shasta Reservoir in April and May, severely constraining the entire SWP-CVP system. The State Water Board was not diligent. On the contrary, it deferred in the fact of a hard decision and negligently failed to put a stop to Reclamation's storage releases. DWR and the California Department of Natural Resources failed to protest the negligence of Reclamation's releases and to actively oppose the crisis that these releases created.

Neither DWR, Reclamation, nor the State Water Board was diligent. All were negligent. Because they all knew the potential consequences of failures to change Reclamation's reckless storage releases and associated water deliveries, they were willfully negligent.

B. Hydrology Does Not Justify the TUCP

On the first page of the TUCP, DWR and Reclamation mischaracterize the reasons for the TUCP: "[T]he continuation of extremely dry conditions in the Delta watershed mean there is not an adequate water supply to meet water right permit obligations for instream flows and water

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[4] *See* March 12 letter to the State Water Board from NRDC et al. and March 14 letter to the State Water Board from CSPA et al., cited, linked and incorporated by reference above.

[5] See NMFS Lessons Learned at https://assets.documentcloud.org/documents/20475924/pages/exhibit-15-p43-xlarge.gif?ts=1612911684137.199.

[6] See first in series of posts on lessons learned about Sacramento River temperature management at: https://calsport.org/fisheriesblog/?m=202103

[7] See second post on lessons learned about Sacramento River temperature management at: https://calsport.org/fisheriesblog/?m=202103.

quality under Water Rights Decision 1641 (D-1641)."[8] Stated bluntly, this statement hides the ball.

The situation of the SWP and CVP is only partially due to hydrology. DWR and Reclamation have mismanaged an admittedly very poor hydrological situation into a crisis of their own making. The crisis for Reclamation and the Sacramento River Settlement Contractors is that they can't have meet the CVP's regulatory obligations and meet the Settlement Contractors' sense of what they need. Their solution is the TUCP.

There are other partial options, which Reclamation is tepidly employing. For example, Reclamation can meet much of its Delta obligations using water stored in New Melones Reservoir. This is a strategy that Reclamation can and should employ more aggressively in 2021.

However, the biggest part of the solution is to deliver less water to the Sacramento River Settlement Contractors. Limit releases from Shasta Reservoir to 5000 cfs. Limit exports of water from the Trinity River to the Sacramento River to 300 cfs, released down Clear Creek and not into the Spring Creek Tunnel and Powerhouse. Don't allow late-season transfers of water stored in Shasta Reservoir. Reduce Shasta releases in October and November overall, and prioritize water released from Shasta for Delta salinity control and outflow. Please see CSPA Proposed Alternative Shasta-Trinity Temperature Management Plan for 2021 (CSPA TMP), referenced and linked above, for additional detail. We also summarize our recommendations to the State Water Board below.

C. The Proposed TUCP Does Not Conserve Storage: It Subsidizes Agricultural Water Deliveries and Water Transfers.

The TUCP could fairly be summarized in the phrase, the fish and people in the Delta giveth, upstream Project diverters taketh away. The TUCP says: "Reclamation and DWR believe the most prudent course of action is to conserve storage in upstream reservoirs until significant improvement of that storage is realized." That sounds terrific. Unfortunately, continuing to over-deliver water to settlement contractors on the Sacramento and Feather rivers does not achieve that goal. As discussed in the CSPA TMP, the State Water Board's proposed 1.25 MAF end-of-September (EOS) storage target for Shasta Reservoir tentatively ordered by the State Water Board on May 21, 2021[9] will not adequately protect salmon in the Sacramento River downstream of Keswick Dam and is likely to lead to levels of egg and alevin mortality comparable to those of 2014 and 2015.

The State Water Board's May 21, 2021 letter to Reclamation states: "[A] 1.25 MAF end of September carryover storage target represents a reasonable balance between temperature control this year, maintaining some carryover storage going into next year, and providing for

[8] TUCP, p. 1.

[9] Letter from Eileen Sobeck, Executive Director, State Water Board, to Kristin White, Reclamation (May 21, 2021), pp. 1-2 ("[A] 1.25 MAF end of September carryover storage target represents a reasonable balance between temperature control this year, maintaining some carryover storage going into next year, and providing for consumptive water supply needs.")

consumptive water supply needs."[10] Like the State Water Board's Order conditionally approving the TUCP, this construction accepts DWR and Reclamation's framing of considering balance in only in the here and now. Balance must consider how the current situation came about. Reclamation and many of its contractors drained their accounts of millions of acre-feet of water in a dry 2020. They spent recklessly in April and May of 2021, when Shasta releases were far more than Reclamation's initial TMP proposed. Balance must consider more than just a snapshot in time.

Modeling by National Marine Fisheries Service suggests that close to 1.5 MAF EOS Shasta storage is needed to protect water temperatures in the spawning reach of the Sacramento River near Keswick.[11] The CSPA TMP suggests that elimination of June-October Trinity River exports through the Spring Creek Tunnel into Keswick Reservoir could allow slightly more water to be withdrawn from Shasta Reservoir (~1.35 MAF EOS) while still maintaining temperature control into the fall. However, the State Water Board's May 21 letter to Reclamation mentions Trinity Reservoir exactly one time, where it vaguely asks Reclamation to show that its operations "will not impact critically low storage levels in other Project reservoirs" including Trinity. What such impact might mean is anybody's guess. Reclamation's May 5, 2021 draft TMP pegged Trinity EOS storage at about 600 TAF.

The State Water Board's Order states: "The changes approved in this Order are expected to result in 60 - 120 TAF of water supply and storage benefits." This is in a year when Sacramento River Settlement Contractors expect to receive about 60% of their allocation or about 1.2 MAF of deliveries and to transfer an additional 150 to 200 TAF. The transfers of water that the Sacramento River Settlement Contractors can clearly live without of themselves overwhelm the potential "savings" from approval of the TUCP. Pardon our third-grade math, but "savings" aren't savings when one is spending twice or ten times as quickly as one is "saving."

D. Approving the TUCP Will Have Unreasonable Effects to Fish and Wildlife.

The TUCP contends that it will not if approved have unreasonable effects on fish and wildlife. The TUCP argues that the incremental difference between drought conditions with D-1641 standards and drought conditions with weakened standards is overwhelmed by the overall poor conditions for fish under drought conditions.[12] The TUCP states that its analyses: "indicate that there would be no unreasonable impacts to fish, wildlife, or other instream resources in the Delta as a result of the 2021 TUCP relative to baseline conditions, as most of the negative effects described would occur primarily as a result of the overall drought conditions."[13]

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[10] *Id.*, pp. 1-2.
[11] *See* Southwest Fisheries Science Center, Temperature Dependent Mortality Modeling, posted to State Water Board Sacramento River Temperature web page May 19, 2021, p. 2 (maintains water temperatures at ~56ºF near Clear Creek through September. Available at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/lowest_tdm_scenarios_5-19-21.pdf. Assumes high Trinity River Imports. *See* accompanying modeling scope summary, p. 2: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/2021/tdm_modeling_scopesummary_20210519.pdf
[12] TUCP, att. 1, p. 8.
[13] *Id.*

This flawed methodology of incremental comparison with a degraded baseline pervades the TUCP's analysis of effects to fish and wildlife. It fails to account for the following factors:

- The extremely fragile condition of fisheries in the Delta and the Central Valley, and their inability to endure more adversity. There are few fish left to damage. There is not enough stock of many species to allow recovery through extensive recruitment in good years to sustainable levels. Under these conditions, the significance of the loss of small numbers is magnified (Figure 3, example for longfin smelt, below). Each recovery becomes a temporary plateau lower than its predecessor.

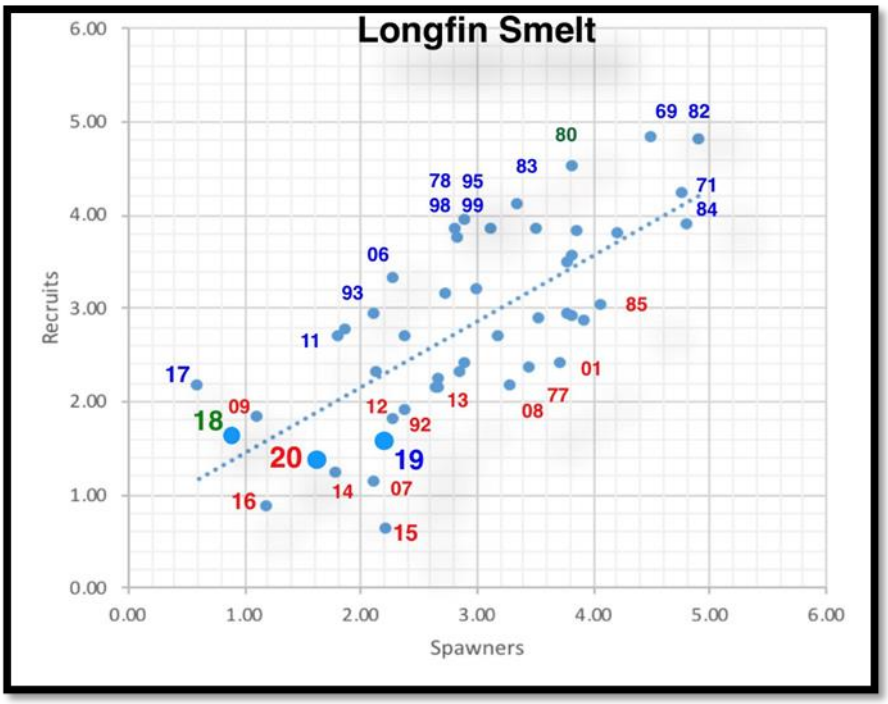

Figure 3. Longfin Recruits (Fall Midwater Trawl Index) vs. Spawners (Index from two years prior) in Log_{10} scale by water year. The relationship is very strong and highly statistically significant. Note declining overall recruitment from 2011 through 2020. Figure generated by CSPA biologist Tom Cannon.

- The inability of fisheries to recover during "non-drought" years due to lack of ecosystem recovery and lack of hydrological recovery. The ecosystem and the fisheries don't have the opportunity to recover before the next drought hits.
- The semi-permanent condition of man-made drought in the Bay-Delta watershed due to the overappropriation of water resources (*see* Figure 18, below).
- The inadequacy of flow and other protections for fisheries during droughts, which occur about 40 % of the time in California.
- The fact that the current condition of Delta and Central Valley fisheries are not simply a function of drought.

- The TUCP treats baseline conditions as simply meteorological and single year hydrology: the drought. It does not consider cascading effects of droughts combined failure to protect fisheries and riverine and estuarine ecology. The same actions in the 2014 and 2015 drought are still having unreasonable effects on fish and wildlife. The fish and ecosystems have not recovered from the last TUCP's and Orders.

This flawed incremental methodology becomes abusive in its application to Delta smelt, which the State Water Board allowed the Projects to push close to extinction during the last drought. Attachment 2 of the TUCP does not include any monitoring data for Delta smelt in 2021, for the simple reason that there are not enough Delta smelt left to detect. The close-to-final decline of Delta smelt occurred under exactly the conditions in 2014 and 2015 that the TUCP says will have no unreasonable effects on fish. When the Delta smelt index is 0 (*see* Figures 8 and 9, below) and the number detected for the year is *de minimis*, incremental analysis is whistling past the graveyard. It is close to reaching that point for longfin smelt and winter-run Chinook salmon.

The TUCP notes that post-larval Delta smelt are positively related to June-August Delta outflow.[14] In 2014 and 2015, the SWRCB issued a series of temporary urgency change orders that reduced Delta outflow and moved X2 upstream into the Delta. CSPA's 2014-2015 comments on those order regarding the consequences of moving X2 upstream proved prescient. As predicted, the results were historically low Delta smelt abundances that are discussed below. Delta smelt have still not recovered from the effects of the 2014-2015 TUCP's and orders, and remain at record lows. CSPA fishery scientist Tom Cannon prepared a series of blog articles on the effects of actions taken in 2015.[15] Drawing Delta smelt upstream into habitat with elevated temperatures, reduced food supply, greater exposure to predators and effects of the export pumps is simply not a viable strategy given present abundances. Extinction is an unacceptable risk and cannot be in the public interest.

Attachment 2 of the TUCP narrowly treats the area of effects as being solely within the Delta. However, the TUCP will also have unreasonable effects to fisheries outside the Delta. The fisheries of the upper Sacramento River are directly at stake, because the underlying rationale of the TUCP is to maintain high deliveries to Sacramento River Settlement Contractors at the expense of water temperatures and fisheries in the Sacramento River downstream of Keswick Dam. The fisheries of the Trinity and Klamath rivers are at stake because the 2021 reservoir operations scheme that the TUCP is designed to support also relies on high exports from the Trinity River system to the Sacramento River system; these exports will severely deplete Trinity Reservoir's cold-water pool.[16] The planned over-delivery of water to Sacramento River Settlement Contractors in 2021 will reduce already severely depleted storage in Oroville

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[14] TUCP, Att. 2, p. 32

[15] *Summer 2015 Temporary Urgency Change Petition: Deadly for Delta Smelt.* https://calsport.org/fisheriesblog/?p=305
Record Heat in the Delta: A Challenge to Reclamation. https://calsport.org/fisheriesblog/?p=249
It is time to save the Delta Smelt. https://calsport.org/fisheriesblog/?p=349
Summer 2015 – Delta Smelt Update. https://calsport.org/fisheriesblog/?p=446

[16] For further discussion, see the CSPA TMP.

and Folsom reservoirs, worsening a year of widely recognized high temperatures in the lower Feather and lower American rivers.

Most of the affected species in the Sacramento, Trinity, lower Klamath, Feather, and American rivers are salmon and steelhead. Sturgeon are also among the affected species. Many of these species are listed under the Endangered Species Act. There is no way that this TUCP can avoid causing take of listed species, notwithstanding the requirement not to do so in the Order conditionally approving the TUCP. That is unreasonable as a term of the Order. In addition, fall-run Chinook will be heavily impacted by the operation of Project reservoirs. Fall-run Chinook are the backbone of the recreational and commercial salmon fisheries and the tribal fisheries on the Trinity and Klamath rivers.

Several species in the Central Valley are in danger of following the spiraling decline of Delta smelt. Will this State Water Board rival its counterpart in 2014 and 2015 for the honor of presiding over extinction or near extinction of still another species? Which one will it be?

E. Approving the TUCP and False River Barrier Will Have Unreasonable Effects on the Bay-Delta Ecosystem.

1. The TUCP Will Increase the Risk of Harmful Algal Blooms.

In evaluating its potential effects on harmful algal blooms (HAB's), the TUCP adds an additional deception to the invocation of the flawed methodology of incremental comparison with a degraded baseline. The TUCP misrepresents the work of Lehman (2018, 2020) to downplay the effect of moving the salinity compliance point on the Sacramento River from Emmaton to Three Mile Slough.

The TUCP states: "The extent to which the TUCP's changed operations from baseline conditions would affect harmful algal blooms is uncertain but likely small given that water temperature is the main driver of bloom intensity (Lehman et al. 2020a)."[17] In fact, Lehman described water temperature as only part of the issue: "Regression analysis suggested the X2 index and water temperature were the primary factors controlling the *Microcystis* bloom during the two extreme water years, even though analysis suggested other environmental factors may have contributed to bloom development."[18] In fact, Lehman puts an explicit point on the issue of moving the salinity compliance point from Emmaton to Three Mile Slough: "A shift of the X2 index by only 3 km was associated with a factor of 3 increase in the percent abundance of subsurface *Microcystis* cells in the cyanobacterial community between the extreme drought years 2014 and 2015 (Lehman et al., 2018)."[19]

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[17] TUCP, p. 6.

[18] Lehman, P., T. Kurobe, and S. Teh. 2020a. Impact of extreme wet and dry years on the persistence of Microcystis harmful algal blooms in San Francisco Estuary, p. 8. Quaternary International. DOI: https://doi.org/10.1016/j.quaint.2019.12.003.

[19] *Id. See also*: Tom Cannon, "The Delta's Trophic Collapse Explained" (April 17, 2019). Available at: https://calsport.org/fisheriesblog/?p=2570; *see also* underlying reference, Hydrodynamic Modeling Coupled with Long-term Field Data Provide Evidence for Suppression of Phytoplankton by Invasive Clams and Freshwater Exports in the San Francisco Estuary, available at: https://www.ucdavis.edu/news/clams-and-water-pumping-explain-phytoplankton-decline-san-francisco-estuary.

The World Health Organization (WHO) call the cyanobacteria that make agal blooms harmful "among the most harmful substances widely found in waterbodies.[20] Beginning in 1999, the Delta is one of the world hot spots for the increasing proliferation of *Microcystis* blooms. High concentrations of the blooms produce toxic or harmful effects on people, dogs, fish, shellfish, marine mammals and birds.

The factors that cause HAB's are prevalent in the Delta: high nutrient concentrations (nitrate, ammonium and phosphate), elevated water temperature and long residence time. The CVP and SWP deliveries have exacerbated all of these conditions. In a presentation to the Delta Independent Science Board, Dr. Lehman observed that zooplankton are affected by *Microcystis* and that there is a huge shift in the phytoplankton community when there are cyanobacteria present. Fish species, such as splittail and Delta smelt, don't do well when *Microcystis* is in their diet. Microcystis blooms decrease bacterial diversity.[21] Figure 4 below is a slide Dr. Lehman used in her presentation to the Delta ISB.

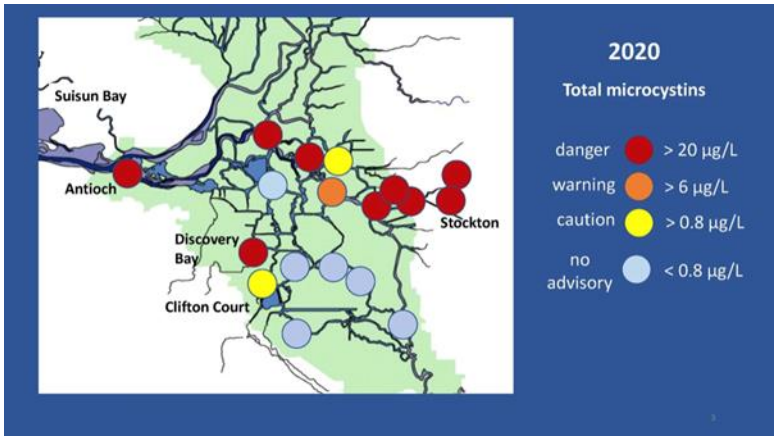

Figure 4: Delta Microcystis levels, 2020 (Lehman)

The TUCP acknowledges that *Microcystis* has expanded in the Delta and is a highly toxic cyanobacteria known to kill phytoplankton, zooplankton and comprise fish health (*See* TUCP at 31). It presents no substantial evidence that it will not unreasonably promote HAB's. On the contrary, the TUCP's cited expert says that exactly TUCP's the proposed move of the Sacramento River salinity compliance point will have just such an effect.

2. The TUCP Will Expand the Abundance and Distribution of Non-Native Submerged Aquatic Vegetation.

It is common knowledge to anyone who boats on the Delta that non-native submerged aquatic vegetation like *Egeria densa* has been rapidly expanding throughout the Delta. It is also common knowledge that besides fouling boat propellers, submerged aquatic vegetation provides superb habitat for non-native fish species like largemouth bass and bluegill and Mississippi

[20] WHO, *Toxic Cyanobacteria in Water*, 2021. https://www.who.int/publications/m/item/toxic-cyanobacteria-in-water---second-edition
[21] https://mavensnotebook.com/2021/04/14/delta-isb-harmful-algal-blooms-in-the-delta-and-elsewhere/

silverside; the TUCP acknowledges this.[22] The TUCP also acknowledges that elevated temperatures and low flow conditions contribute to the proliferation of submerged aquatic vegetation that provide habitat for predators of Delta smelt.[23] Reducing flows, increasing residence time, elevating temperature resulting from approval of the TUCP and False River Barrier are likely to cause significant harm to salmon and pelagic species, given their current population levels.

3. The TUCP Will Increase the Abundance and Distribution of Asian Clams.

The TUCP acknowledges that reducing Delta outflow under drought conditions would move X2 upstream and expand its range and overall grazing rate of *Potamocorbula amurensis*, if salinity remains high enough for several months.[24] *P. amurensis* has negatively affected the food web that support pelagic and salmonid species. Installation of the False River Barrier in 2014 and 2015 also contributed to increased salinity in the lower San Joaquin River from Jersey Point to Prisoners Point.[25]

4. The TUCP Will Reduce Important Parts of the Food Chain for Native Species.

The TUCP acknowledges that "July–September Delta outflow is positively correlated with the density of the zooplankton *Pseudodiaptomus forbesi* (an important prey item for species including delta smelt and longfin smelt) in the low salinity zone..."[26] Reducing the abundance of key prey species for listed species hovering on the edge of extinction is simply too great a risk.

III. The TUCP Is Not in the Public Interest.

The TUCP claims: "The public interest is best served by maintaining, for as long into the year as possible, storage to support minimum exports and water quality necessary for the protection of critical water supplies and species protections."[27] We agree. That is one reason why the TUCP in not in the public interest. It is not in the public interest to deprive already decimated fisheries of already inadequate flow protections while delivering ten or more times the amount of water conserved to rice farmers and other agricultural producers in the Sacramento Valley who are in addition selling twice the amount of water taken from the fish.

Depriving fisheries means depriving the people and the economies that depend on them. Those who depend on fish for livelihoods and sustenance are also going to take a terrible hit in 2021, and not just in the area that this proposal addresses. These include commercial and recreational anglers, whose very industries are in jeopardy; tribes for whom salmon are integral to their ways of life; and Covid-decimated local economies dependent on recreation and tourism dollars.

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[22] TUCP, Att. 2, p. 45.
[23] *Id.*, p. 31.
[24] *Id.*, pp. 6 and 31.
[25] https://calsport.org/fisheriesblog/?p=490
[26] *Id.*, pp. 5-6.
[27] TUCP, Att. 1, p. 8.

And, as discussed above and below, it is not only fisheries that are at play. In the Delta and in the Klamath-Trinity system, HAB's and other foundational failures of the ecosystems are becoming more and more commonplace. Drought mismanagement accelerates the impacts of this systemic disintegration. This has immediate effects on human health and on the health of fish, wildlife and plant life.

The TUCP and associated actions of DWR and Reclamation

IV. The TUCP Is Contrary to Law.

A. The TUCP Is Deliberately Designed to Enable Reclamation to Make Water Deliveries to Sacramento River Settlement Contractors in Excess of their Water Rights.

The underlying water rights on which the Sacramento River do not justify the level of deliveries that Reclamation is making to them. Those underlying water rights are limited to natural flows, and must be further reduced by flows devoted to riparian diverters and senior appropriative diverters. The fact that Reclamation has a contract with the Sacramento River Settlement Contractors does not exempt Reclamation or those contractors from compliance with Reclamation's water right obligations, even in the underlying Settlement Contractor rights are senior to Reclamation's. Reclamation's delivery to the Sacramento River Settlement Contractors of water needed to meet Reclamation's public trust obligations violates the terms of Reclamation's water rights.

B. The TUCP Violates the Public Trust Doctrine and the Requirement under the California Constitution that Use of Water Be Reasonable.

The Sacramento River Settlement Contractors and any other water rights holders do not have the right to have Reclamation deliver water to them when that water needs to be held in storage to maintain temperature control in Shasta Reservoir or released into and through the Delta to protect public trust uses. While the Delta salinity requirement that the TUCP proposes to change temporarily is ostensibly an agricultural requirement, there is no question of its necessity to protect public trust resources, including fisheries, recreation, and public health. The Delta outflow requirement that the TUCP proposes to reduce is explicitly a requirement to protect public trust resources.

Public trust uses are superior to uses under a water right, including senior rights and riparian rights. These principles are clearly spelled out in *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463 [173 Cal.Rptr.3d 200]:

> [T}he Board has the ultimate authority to allocate water in a manner inconsistent with the rule of priority, when doing so is necessary to prevent the unreasonable use of water. (El Dorado, supra, 142 Cal.App.4th 937, 966.) Because " 'no one can have a protectible interest in the unreasonable use of water' [citation] . . . when the rule of priority clashes with the rule against unreasonable use of water, the latter must prevail." (Ibid.) {Slip Opn. Page 23}

> This case, moreover, involves more than traditional water rights. As the Supreme Court held in Audubon Society, no party can acquire a vested right to appropriate water in a manner harmful to public trust interests and the state has "an affirmative duty" to take the public trust into account in regulating water use by protecting public trust uses whenever feasible. (Audubon Society, supra, 33 Cal.3d at pp. 446--447.) Although the Audubon Society court considered the public trust doctrine only in relation to permitted appropriative water rights, subsequent decisions have assumed the doctrine applies as well in the context of riparian and pre-1914 appropriator rights. (United States, supra, 182 Cal.App.3d at p. 106 [in Audubon Society, "the court determined that no one has a vested right to use water in a manner harmful to the state's waters"]; El Dorado, supra, 142 Cal.App.4th at p. 966 ["when the public trust doctrine clashes with the rule of priority, the rule of priority must yield"].)

As described above, it is a violation of the California Constitution's prohibition of unreasonable use of water for Reclamation to prioritize agricultural water deliveries over minimal protection for instream resources.

The Order does not show how it considered whether protecting public trust resources through conditions of approval would be feasible and in the public interest, taking into consideration all relevant factors. The failure of the Order to make even the most minimal effort to show its work violates the public trust doctrine.

C. The TUCP's Treatment of Water Transfers is Unlawful.

The TUCP requests and the Order approves exemption of water transfers from Delta water quality requirements.[28] It makes no difference to fish if the increased risk of entrainment or other causes of mortality in the central and south Delta is caused by export of transferred water rather than export of Project water. The Board should disallow transfers of *any* water through Project facilities when D-1641 standards are not being met. It should also require the same import-export mitigations it requires of the Projects. What is unreasonable for Project water is no less unreasonable for anyone else's water.

Moreover, the proposed transfer of water from Sacramento River Settlement Contractors south of Delta is unreasonable on its face. The very purpose of the TUCP is to maintain storage. That storage is needed for temperature control throughout 2021 and for carryover storage for 2022. Transferring water does not maintain storage. Allowing the Sacramento River Settlement Contractors to transfer water at the end of 2021 defeats the very purpose of the TUCP and discloses the underlying unlawful transfer of public trust water to these CVP diverters.

It is worthy of note that Reclamation disallowed water transfers by senior diverters on the Stanislaus River in 2021. Although not published, this was apparently because Reclamation determined that such transfer water would have transferred water that would not otherwise have

[28] TUCP, pp. 1-2. Order, p.

been available to senior Stanislaus River water rights holders and CVP contractors to divert locally: stored water belonging to Reclamation.

The same logic applies to the Sacramento River Settlement Contractors. Transfer water assumes that water would have been otherwise available for diversion. In order to evaluate whether water is available for transfer, the State Water Board must first determine how much water Reclamation could deliver to Sacramento River Settlement Contractors in 2021 at their stated places of use and still remain within the requirement that all use of water must be reasonable. That amount should be the ceiling for release from Shasta to meet 1) north of Delta deliveries to Sacramento River Settlement Contractors, **PLUS** 2) transfers from Sacramento River Settlement Contractors. The Board must not allow Sacramento River Settlement Contractors to transfer water they could not use north of Delta while still complying with the requirements of the public trust and reasonable use. Stated differently, transfers must not be a workaround to evade reasonable use. Stated still differently, the Sacramento River Settlement Contractors cannot sell Reclamation's water. Stated still more differently, the Sacramento River Settlement Contractors cannot limit Reclamation's ability or obligation to meet its public trust responsibilities by earmarking water for buyers.

In the Order, the Executive Director of the State Water Board defers a decision on the reasonableness of water transfers by requiring information on a case-by-case basis rather than making a programmatic decision.[29] In addition, the Order does not directly respond to the request for exemption of transfer water from Delta export limits and other export constraints. This approach lacks clarity, but appears to make export requirements apply to approved transfers.

D. The TUCP and Order Are beyond the SWRCB's Jurisdiction.

Delta water quality criteria are promulgated pursuant to requirements of the federal Clean Water Act. There is an acknowledged disagreement between the State Water Board and U.S. EPA regarding whether the flow requirements contained in the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary are subject to federal approval. The federal Clean Water Act covers flows, since flow and water quality are flip sides of the same coin. However, notwithstanding flows, neither the Governor nor the State Water Board has authority to unilaterally waive water quality standards that protect designated uses under the federal Clean Water Act.

E. Summary of why the TUCP and Order Conditionally Approving the TUCP are Contrary to Law.

The TUCP and Order contravene the public trust doctrine by failing to balance a relatively healthy Central Valley agricultural sector that represents somewhat less than 2% of the state's gross domestic product with critically depressed public trust resources hovering on the brink of extinction. Extinction cannot be balanced! They also violate the public trust doctrine by prioritizing water rights priority over public trust uses and the doctrine of reasonable use

[29] Order, p. 38.

(Article X, Section 2 of the California Constitution). In addition, they violate the public trust doctrine by failing to show how more effective measures to protect carryover storage were not feasible.

The TUCP and Order contravene the federal Clean Water Act by arbitrarily weakening criteria without following mandated processes and ignoring federally promulgated water quality criteria.

The TUCP and Order violate California Fish and Game Code § 5937 by failing to keep fish downstream of dams in good condition.

The TUCP and Order accept Reclamation's unlawful failure to limit the Sacramento River Settlement Contractors to delivery under their underlying water rights, prioritizing federal contracts over the doctrines of public trust and reasonable use.

The TUCP and Order violate the state and federal Endangered Species Acts. Notwithstanding the letters of concurrence from fisheries agencies, the record clearly demonstrates that the TUCP and Order will harm and result in the take of listed species.

V. The State Water Board is Continuing Its Pattern and Practice of Elevating Irrigated Agriculture Over Fisheries, Water Quality, Cities and Climate Reality.

A crystal ball was not required to predict the SWRCB's response to the current TUCP. As it has previously, the Board noticed a brief public comment period and midway through the period issues its TUCP Order (TUCO). Nor was a mind reader needed to predict the response of SWP and CVP operators to the current critically dry year. As they have previously, they recklessly delivered water under the assumption that the following year would be wet and, when it wasn't, they knew the SWRCB would bail them out by approving TUCPs to weaken regulatory flow and water quality standards. This has been the prevailing pattern and practice over decades.

Equally predictable is the fact that fish and wildlife and water quality will grievously suffer the consequences, and that municipal inhabitants will be subject to stringent water conservation requirements during the drought while irrigated agriculture will emerge relatively unscathed.[30] It is also predictable that the SWRCB will hold a hearing on the various protests and objections at the end of the season and declare that its actions were legal and defensible, while pointing out that the waivers of water quality objectives failed to provide reasonable protection to fish and wildlife. They will also assure everyone that it will be different next time, just as they did in Water Rights Order 2015-0043 (corrected), page 39, at the conclusion of the last drought.

> However, the State Water Board also determines that the status quo of the past two years is not sustainable for fish and wildlife and that changes to the drought planning and

[30] See *Status of Agriculture in the Central Valley* below. Also see U.S. Department of Agriculture, *2021 California Almond Forecast*, predicting record almond production, 12 May 2021, p. 1. https://www.almonds.com/sites/default/files/2021-05/2021SubjectiveForecast.pdf

response process are needed to ensure that fish and wildlife are not unreasonably impacted in the future and to ensure that various species do not go extinct.

But nothing changes. The SWRCB will predictably continue its longstanding pattern and practice of weakening water quality objectives established for droughts and native fisheries will continue on their path to extinction. The SWRCB is acting as if it is a subsidiary of the SWP and CVP and no longer an independent regulatory agency. Below, we discuss this decades-long pattern and practice and the resulting degradation of public trust resources: a pattern and practice that does not comport with constitutional, statutory or regulatory requirements.

Water rights are subject to compliance with constitutional mandates of reasonable use and public trust protection, as well as compliance with promulgated water quality standards. The SWRCB has already determined that existing Bay-Delta water quality standards fail to protect fish and wildlife public trust uses.[31] To routinely weaken already acknowledged inadequate water quality objectives cannot be in the public interest or comply with constitutional and statutory requirements. This is especially true when the SWRCB has already informed USBR and DWR that current violations are a result of the overallocation of Project water during dry conditions and that the Projects appear to have discounted the need to maintain regulatory compliance when making operational decisions.[32]

A. As Fisheries Decline, Irrigated Agriculture Continues to Profit.

The State Water Board has exhibited considerable bias toward agriculture at the expense of Public Trust resources over the years. This bias is evidenced by the fact that Central Valley agriculture has not experienced impacts comparable to the precipitous declines suffered by fisheries, aquatic ecosystems and recreation. Droughts have magnified this bias, evidenced by closed or restricted fishing seasons, reduced commercial and recreational fishermen, and half-empty marinas on the one hand, and increasing agricultural production and employment on the other.

According to the annual reports that must be submitted by county agricultural commissioners to the California Department of Agriculture, farm production and employment in the San Joaquin Valley has significantly increased since 2000. Between 2000 and 2019, the gross

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[31] SWRCB, *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*, 2010, p. 2. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf
SWRCB, *July 2018 Framework for the Sacramento/Delta Update to the Bay-Delta Plan*, p. 6. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/sed/sac_delta_framework_070618%20.pdf
SWRCB, *Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and it's Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows*, 2017. https://www.waterboards.ca.gov/water_issues/programs/peer_review/docs/scientific_basis_phase_ii/201710_bdphaseII_sciencereport.pdf

[32] SWRCB, letter to Ted Craddock, DWR and Ernest Conant, *Compliance with Water Right Requirements in the Bay-Delta Watershed*, 30 April 2021, p. 3. https://www.waterboards.ca.gov/waterrights/water_issues/programs/compliance_monitoring/sacramento_sanjoaquin/docs/2021/20210430_swbltr_bdcompliance.pdf

value of agricultural production increase from 14.4 billion to 36.4 billion dollars, representing a 152.5% increase. Farm production actually tended to increase during the early years of a drought.

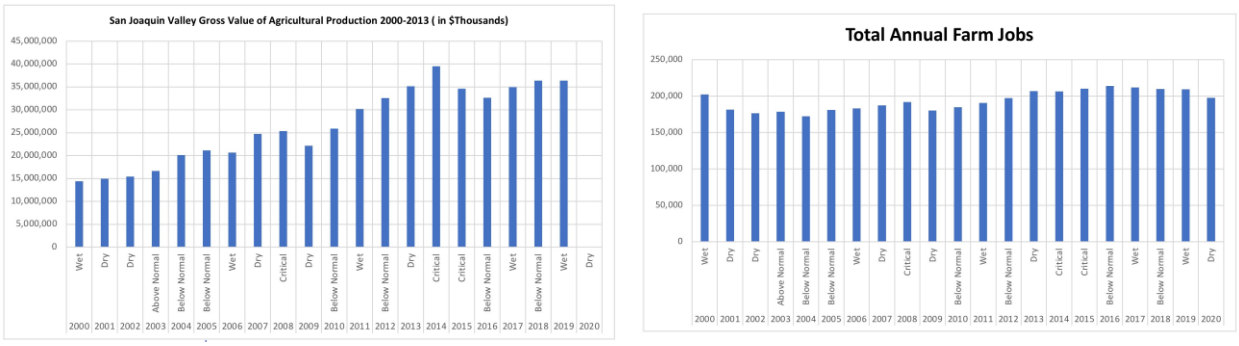


Figure 5. Annual farm production in Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus and San Joaquin Counties

The situation is similar for the Sacramento Valley. The gross value of agricultural production increased from $2.34 billion in 2000 to $5.26 billion in 2019, representing a 72.4% increase. According to the California Employment Development Department, agricultural employment in the Sacramento Valley increased 16.6% between 2000 and 2020.

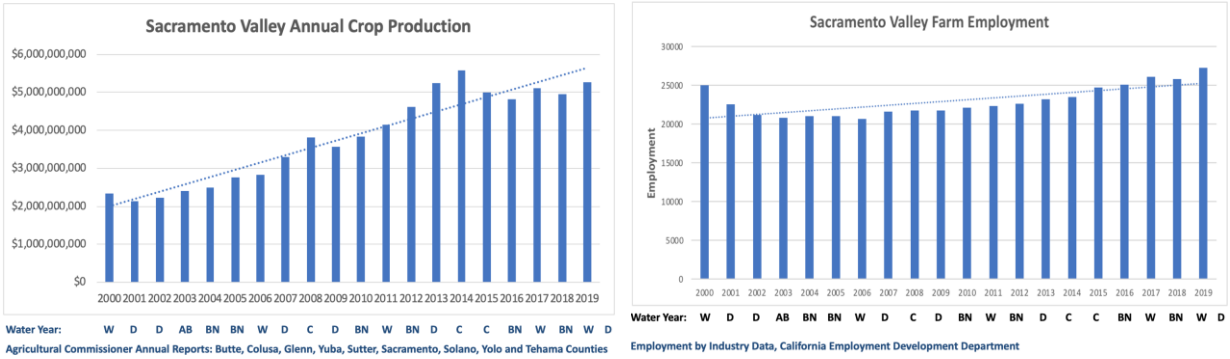


Figure 6. Annual farm production in Butte, Colusa, Glenn, Yuba, Sutter, Sacramento, Solano, Yolo and Tehama Counties

Even in this critically dry year, the U.S. Department of Agriculture is predicting that California almond production and almond bearing acreage will reach record highs.[33]

[33] https://www.almonds.com/sites/default/files/2021-05/2021SubjectiveForecast.pdf

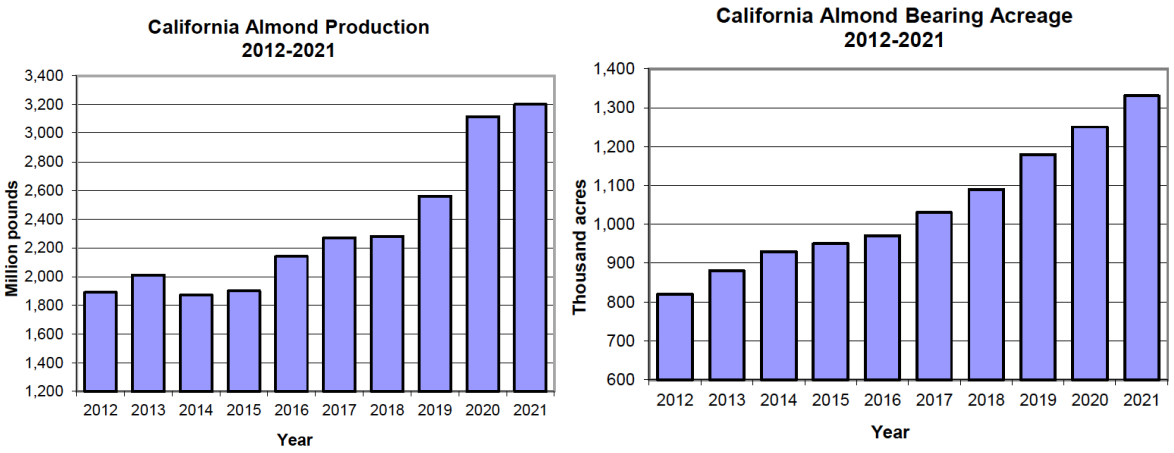


Figure 7. California almond production and acreage 2012-2020, with 2020 forecasted values

Agriculture has weathered reoccurring droughts rather well compared to the devastating impacts to public trust resources and those who value and depend upon them.

B. The State Water Board Has Failed to Reduce or Eliminate the Decline of Native Fisheries.

The precipitous collapse of the Central Valley's pelagic and anadromous fish populations since construction of the SWP in 1967 has been documented at considerable length. Since the State Water Project began exporting water from the Delta, the Department of Fish and Wildlife's (CDFW) Fall Midwater Trawl indices (1967-71 versus 2016-2020) for striped bass, Delta smelt, longfin smelt, splittail and threadfin shad have declined by 98.1, 99.9, 99.8, 99.3 and 94.3 percent, respectively. The U.S. Fish & Wildlife Service's (USFWS) Anadromous Fisheries Restoration Program documents that, since 1967, in-river natural production of Sacramento winter-run Chinook salmon and spring-run Chinook salmon have declined by 98.2 and 99.3 percent, respectively, and are only at 5.5 and 1.2 percent, respectively, of doubling levels mandated by the Central Valley Project Improvement Act, California Water Code and California Fish & Game Code. Numerous species have been listed, pursuant to state and federal endangered species acts.[34]

The SWRCB has long been aware of the plight of Central Valley fisheries. In 1978, following a long formal evidentiary hearing and in a moment of remarkable candor, the SWRCB found that "full mitigation of project impacts on all fishery species now would require the virtual

[34] Southern DPS green sturgeon (*Acipenser medirostris*), federal threatened, candidate for federal endangered; Delta smelt (*Hypomesus transpacificus*), state endangered, federal threatened, Longfin smelt (*Spirinchus thaleichthys*), state threatened; Central Valley steelhead (Oncorhynchus mykiss), federal threatened; Sacramento winter-run Chinook salmon (Oncorhynchus tshawytscha), state endangered, federal endangered; Central Valley spring-run Chinook salmon (Oncorhynchus tshawytscha), state threatened, federal threatened; Central Valley fall/late-fall-run Chinook salmon (*Oncorhynchus tshawytscha*), federal species of concern, state species of special concern; Sacramento splittail (*Pogonichthys macrolepedotus*), state species of special concern; Pacific lamprey (*Entosphenus tridentate*), federal species of concern and river lamprey (*Lampetra ayresi*), state species of special concern. The Project also has potential to adversely affect Killer whales or Orcas (Southern Resident DPS) (*Orcinus orca*), federal listed as endangered because they are dependent upon Chinook salmon for 70% of diet, and reduced quantity and quality of diet is one of the major identified causes of their decline.

shutting down of the project export pumps." D-1485, page 13. In 1988, following another extensive evidentiary hearing, the SWRCB acknowledged, "a safe level of exports is not known." Draft 1988 Water Quality Control Plan for Salinity, 7.3.2.5. 9. 7-32. The 1988 draft order found that "optimal water quality objectives" for shad and striped bass larvae and salmon smolt survival in the Delta would require the prohibition of all exports between 1 April through 30 November, in all water years. *Id*., Table 5-4-1, p. 5-110. Political pressure brought by the SWP and CVP contractors led then Governor George Deukmejian to direct the SWRCB to withdraw the draft order.

Yet, another long evidentiary proceeding led the SWRCB to issue Draft Water Right Decision D-1630 in 1992. D-1630 documented that, by 1991, adult fall-run Sacramento River salmon escapement had been halved since the late 1960's, spring-run Sacramento River salmon abundance was about 0.5 percent of historic runs, San Joaquin River fall-run salmon escapement dropped from 70,000 in 1985 to 430 in 1991, the 1985 level of Delta smelt abundance was 80% lower than the 1967-1982 average population, adult striped bass declined from about 3 million in the early 1960s to 1.7 million in the late 1960s to an estimate of 590,000 in 1990, abundances of shrimp and rotifers declined between 67 percent and 90 percent in the 1970s and1980s, white catfish population have severely declined since the mid-1970s, and overall fish abundance in Suisun Marsh has been reduced by 90 percent since 1980. D-1630, p. 29. The SWRCB declared in draft D-1630 that "net reverse flows caused by export pumping are adverse to fishery resources because they pull water and young fish of various species from the western Delta into the central Delta." D-1630. P. 31. It declared that "reverse flows should not occur in the San Joaquin and Sacramento Rivers during the delta smelt's spawning period in order to transport the larvae to appropriate habitat and to keep them there." *Id*., p. 41-42. It included a requirement that "there should be no reverse flow for all water year types on a 14-day running average in the western Delta…between July 1 and July 31" and that the "14-day running average flow shall be greater than -2000 cfs…between August 1 and January 31. *Id*., p. 46-47. Again, political pressure brought by SWP and CVP contractors led then Governor Pete Wilson to direct the SWRCB to not finalize the order.

In January 1995, the U.S. Environmental Protection Agency (EPA) stepped in and promulgated stringent federal Clean Water Act (CWA) water quality standards for the Delta that was significantly more protective than existing state criteria. 40 CFR 131.37. The SWRCB has refused to acknowledge or abide by these federal standards.

The SWRCB subsequently issued a Water Quality Control Plan (Bay-Delta Plan) for the San Francisco Bay/Sacramento-Dan Joaquin Delta Estuary (95-1WR) in May 1995. The SWRCB plan was significantly weaker than the EPA promulgated standards and wasn't incorporated into water rights permits until D-1641 was issued in 2000. Mindful of the history of droughts in California, especially the severe six-year 1987-92 drought, D-1640 contained specific water quality criteria for wet, above normal, below normal, dry and critically dry water years.

Following the issuance of D-1641, Delta pelagic species experienced a collapse in fish populations known as the "Pelagic Organism Decline." Fish abundance indices calculated by the Interagency Ecological Program (IEP) for 2002-2004 were at record lows for Delta smelt and

striped bass and near-record lows for longfin smelt and threadfin shad. This decline was characterized by the IEP as a precipitous "step change" to very low abundance. In response to these changes, the IEP formed a Pelagic Organism Decline work team to evaluate the potential causes for the declines. The work team identified three factors that were likely causes of the decline: water project operations, toxins and invasive species. It should be noted that water project operations had drastically altered the hydrology of the estuary and had enhanced and expanded habitat for invasive species.

C. Recent Droughts Have Accelerated the Decline of Fish Populations.

The low abundance indices for pelagic species recorded during the 2002-2004 decline continued to the 2012-15 drought. Water year 2013 was formally classified as a "dry" water year, and dry water year criteria were applicable. However, SWRCB Executive Director Tom Howard, in a 24 May 2013 email, and SWRCB Delta Watermaster Craig Wilson, in a subsequent letter to DWR and USBR, announced that they would not object or take any enforcement action if DWR and USBR operated to meet "critically dry" year objectives for the Western and Interior Delta.

In 2014, DWR and USBR requested a series of TUCP's seeking to weaken criteria protecting beneficial uses in the Delta and tributary rivers. The SWRCB quickly responded by issuing a series of TUCO's on 31 January, 7 February, 18 March, 9 April, 18 April and 2 May and 7 October that significantly weakened Delta outflow, San Joaquin flow, Sacramento River temperature, Delta Cross Channel (DCC) operational requirements, and the export and salinity control criteria contained in D-1641. Measures in these TUCO's reduced Delta outflow requirements to 3,000 cfs and, beginning 2 May, moved the Emmaton salinity compliance point to Threemile Slough. Numerous parties filed Protests, Objections and Petitions for Reconsideration. CSPA et al. filed Protests, Objections and Petitions for Reconsideration and Public Hearing on 3 March, 28 April and 13 May, as well as testifying at the 18-19 February 2014 workshop. The SWRCB denied all Petitions for Reconsideration on 24 September 2014.

Again in early 2015, the SWRCB quickly responded to TUCP's by DWR and USBR and issued TUCO's on 3 February, 5 March, 6 April, 3 July and 2 August, weakening D-1641 and Stanislaus River criteria. CSPA et al. provided TUCO comments on 26 February; submitted Protests, Objections and Petitions for Reconsideration and Public Hearing on 13 February, 6 May, 17 June, 3 August and 6 August 2015, and provided extensive comments at the SWRCB workshops on 18 February, 20 May and 24 June. CSPA submitted a formal Complaint for violations of D-1641 Bay-Delta Plan requirements, Clean Water Act, Endangered Species Act, Public Trust Doctrine and the California Constitution against the SWRCB, USBR and DWR on 21 July 2015. CSPA also submitted a formal complaint against the SWRCB and USBR for violations of temperature requirements in the Basin Plan, WR Order 90-05, Clean Water Act, Endangered Species Acts, Public Trust Doctrine and the California Constitution was submitted on 2 August 2015. And again in 2016, the SWRCB issued a TUCO on 19 April reducing spring pulse flows on the San Joaquin River.

The SWRCB's failure to enforce and/or its decisions to waive compliance with flow and water quality standards during the 2012-2015 drought exacerbated the decline of already depressed fisheries. Several fish species are now facing extinction.

CDFW's Kodiak Trawl for adult Delta smelt was initiated in 2002, following the collapse of pelagic species. The low numbers of adults following the last drought led fisheries scientist Peter Moyle to declare impending extinction of Delta smelt.

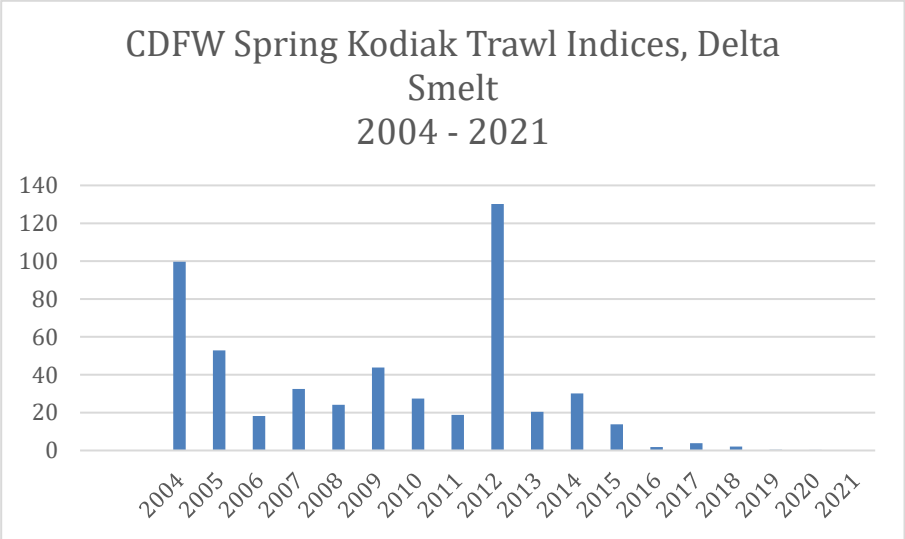


Figure 8. Delta Smelt Kodiak Trawl indices, 2004-2021

CDFW's 20 mm Survey was initiated in 1995 to monitor postlarval-juvenile Delta smelt throughout their historical range.

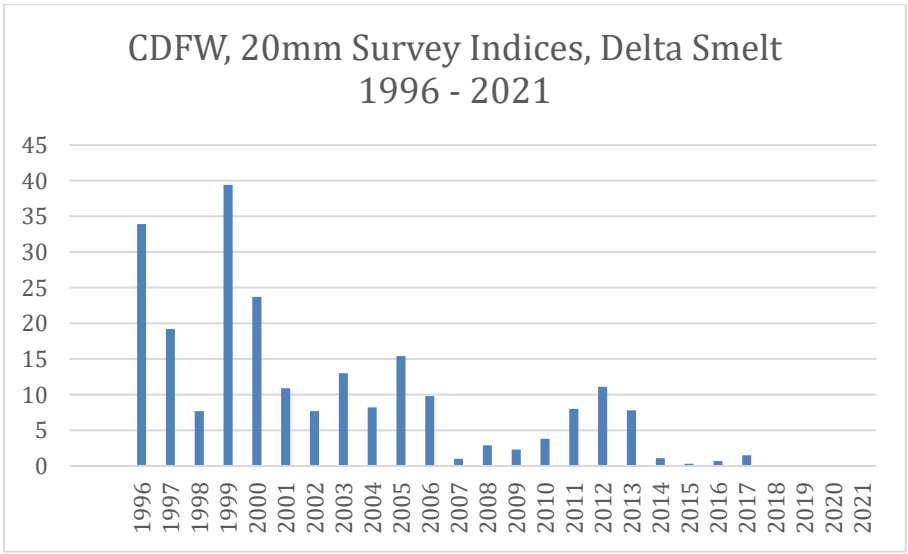
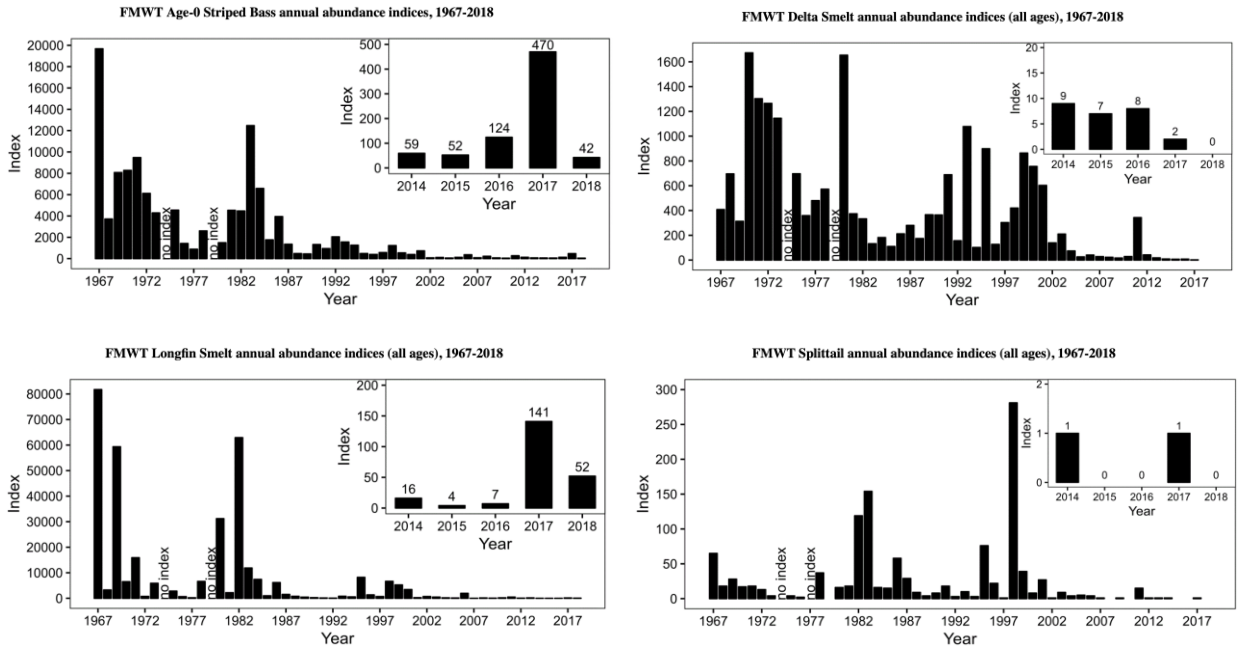


Figure 9. Delta Smelt 20 mm Survey indices, 2004-2021

The already depressed numbers of postlarval-juvenile Delta smelt collapsed following the last drought. There is no scientific mystery in the declining Delta smelt population. Following birth, postlarval-juvenile Delta smelt move downstream into the low salinity zone represented by X2. This area has suitable salinity, more abundant food supply, lower temperatures, reduced predation and protection from the export pumps. During droughts and, especially, when the SWRCB relaxes outflow standards, X2 and Delta smelt move eastward into less hospitable habitat with stressful or lethal temperatures, less food availability, increased predation and greater exposure to being drawn into the export pumps. A more comprehensive description of impacts to Delta smelt from the SWRCB's weakening of Delta standards are described in Exhibit 1 (Summer of 2013), Exhibit 2 (Summer of 2014) and Exhibit 4 (Delta Smelt on the Scaffold) attached to CSPA et al.'s 13 February 2015 Protest, Objection and Petition for Reconsideration and Public Hearing, incorporated by reference into this document.[35]

Delta pelagic fisheries experienced significant decline following construction and operation of DWR's Delta pumping facilities in 1967. A dramatic stair-step decline in pelagic fishery abundance levels occurred in 2002-2004 following the SWRCB's issuance of D-1641. Delta fisheries hovered at near or actual historic lows. The SWRCB's ignoring/weakening of D-1641 water quality criteria during subsequent droughts has resulted in another dramatic stair-step decline, and several species are now at severe risk of extinction. This decline is illustrated by CDFW's Fall Midwater Trawl, a series of frequent sampling events over September-December of each year since 1967. As noted above, CDFW's Fall Midwater Trawl indices (1967-71 versus 2016-2020) for striped bass, Delta smelt, longfin smelt, splittail and threadfin shad have declined by 98.1, 99.9, 99.8, 99.3 and 94.3 percent, respectively.



[35] All available at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/tucp/index.html.

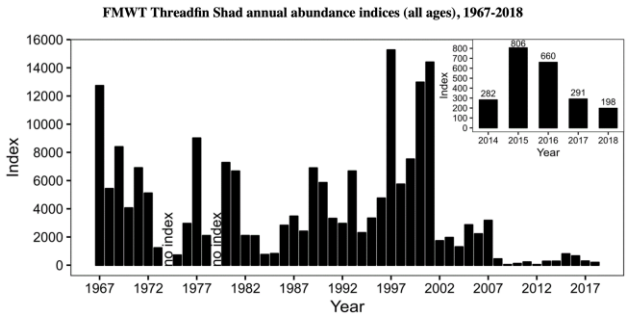


Figure 10. Fall Midwater Trawl Indices for Various Pelagic Delta species (starts on previous page)

A similar situation exists for Central Valley Chinook salmon. As noted above, the USFWS' Anadromous Fisheries Restoration Program documents that, since 1967, in-river natural production of Sacramento winter-run Chinook salmon and spring-run Chinook salmon have declined by 98.2 and 99.3 percent, respectively, and are only at 5.5 and 1.2 percent, respectively, of doubling levels mandated by the Central Valley Project Improvement Act, California Water Code and California Fish & Game Code.

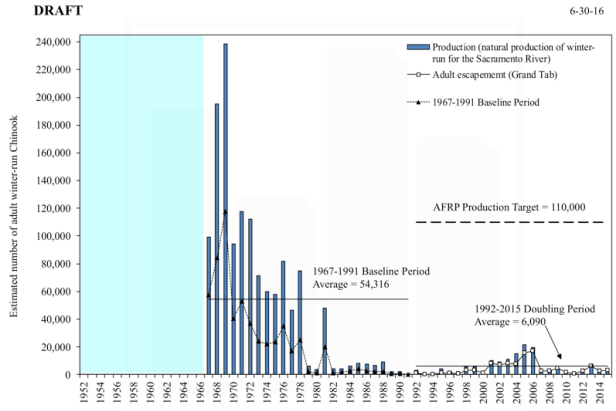


Figure 8. Estimated yearly adult natural production, and in river adult escapements for above RBDD mainstem Sacramento River winter-run Chinook salmon. = no data available for 1952-1966. 1992-2015 numbers are from CDFG Grand Tab (Apr 11, 2016). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

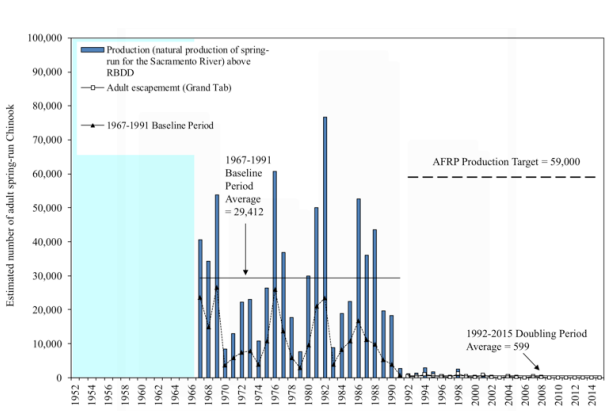


Figure 9. Estimated yearly adult natural production, and in-river adult escapements for above RBDD mainstem Sacramento River spring-run Chinook salmon. 1992-2015 numbers are from CDFG Grand Tab (Apr 11, 2016). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

Sacramento River Winter-run Chinook Salmon

Sacramento River Spring-run Chinook Salmon

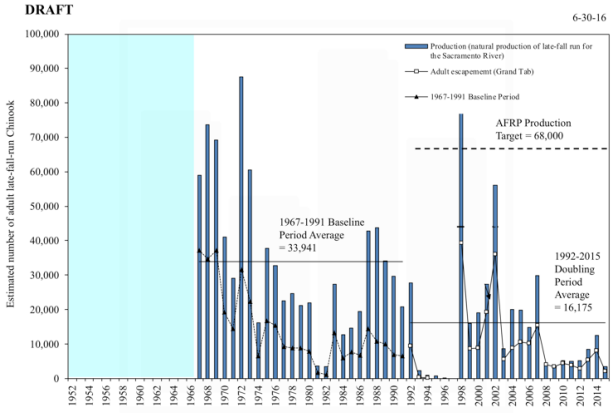


Figure 7. Estimated yearly adult natural production, and in-river adult escapements for above RBDD mainstem Sacramento River late-fall-run Chinook salmon. = no data available for 1952-1966. 1992-2015 numbers are from CDFG Grand Tab (Apr 11, 2016). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

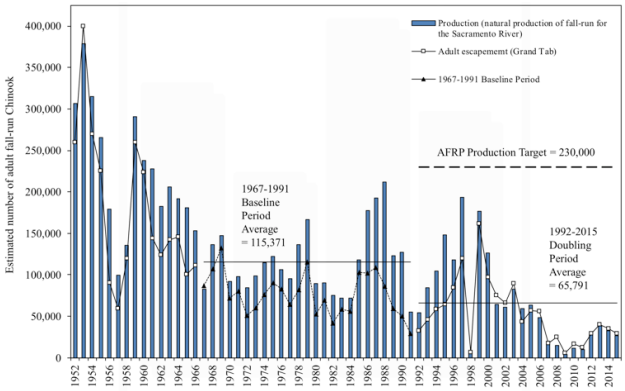


Figure 6. Estimated yearly adult natural production, and in-river adult escapements for the entire mainstem Sacramento River fall-run Chinook salmon. 1952-1966 and 1992-2015 numbers are from CDFG Grand Tab (Apr 11, 2016). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

Sacramento River Late Fall-run Chinook Salmon

Sacramento River Fall-run Chinook Salmon

Figure 11. Abundance indices for different runs of Sacramento River Chinook salmon

USFWS's Anadromous Fisheries Restoration Program documents that, since 1967, in-river natural production of fall-run Chinook salmon on the Stanislaus and Tuolumne Rivers have declined by 92.6 and 93.6 percent, respectively, and are 76.6 and 81.8 percent, respectively, below the doubling levels mandated by the Central Valley Project Improvement Act, California Water Code and California Fish & Game Code. According to CDFW's Grand Tab Central Valley Chinook Population Database Report, escapement of fall-run Chinook salmon back to the Stanislaus and Tuolumne Rivers, between 1967-1971 and 2015-2019, declined by 53.7 and 94.8 percent, respectively. During droughts, the SWRCB has allowed export pumping to exceed San Joaquin River flow during the spring migration period. Consequently, the vast majority of fish migrating out of the San Joaquin River are drawn to the export pumps and few, if any, reach San Francisco Bay. Unfortunately, this also includes the experimental spring-run Chinook salmon reintroduced under the auspices of the San Joaquin River Restoration Program.

The SWRCB's relaxation of Sacramento River temperature criteria in 2014 moved the temperature compliance point upstream to Redding and eliminated much of the spawning habitat for winter-run and spring-run Chinook salmon. USBR delivered 1.2 million acre-feet of water from Shasta Reservoir to Sacramento Settlement Contractors and another 119 TAF to Tehama-Colusa Canal between April and September 2014. This delivery schedule depleted Shasta Reservoir, exhausted the cold-water pool, and led to high water levels during spawning and low flow levels during emergence (Figure 5). Winter-run salmon spawn June-July, eggs hatch July-early September, and fry emerge late September-mid-October When water deliveries to the Settlement Contractors concluded, water releases from Keswich were substantially reduced, and the resulting dewatering of redds and high water temperatures in the Sacramento River killed 95% of the cohort. This management also caused significant and potentially complete mortality to the cohort of in-river spawning Sacramento River spring-run Chinook salmon. A more comprehensive description of impacts to winter-run Chinook salmon and pelagic species from the SWRCB's weakening of temperature and Delta standards are described in the 13 February 2015 Protest, Objection and Petition for Reconsideration and Public Hearing and Exhibit 4 (Demise of Winter-Run in Summer 2014).[36]

[36] https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/cspa_shutes021315.pdf
https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/cspa_att1.pdf
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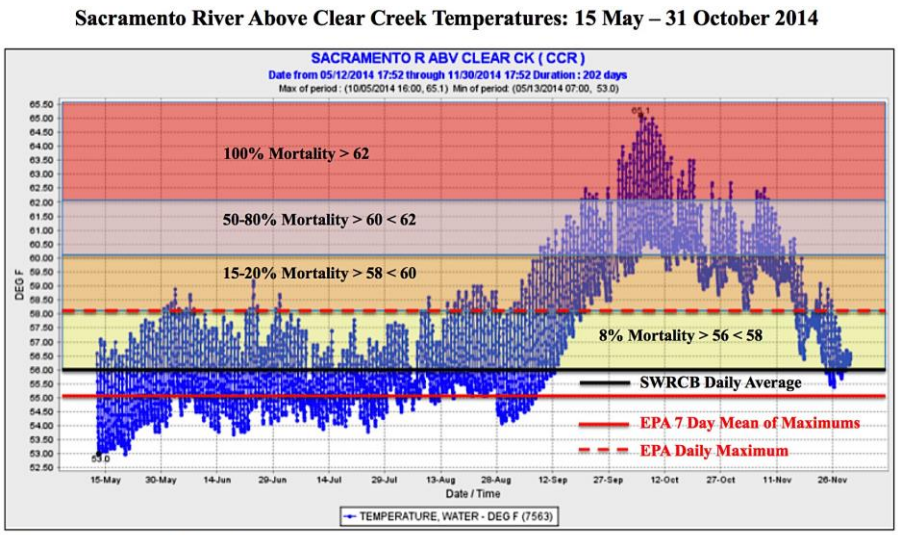


Mortality schedules developed by USFWS and CDFG for use in evaluation of Shasta Dam temperature control alternatives in June 1990 (Richardson et al. 1990).

Figure 12. Summer 2014 Sacramento River Water Temperatures and Winter-Run salmon mortality

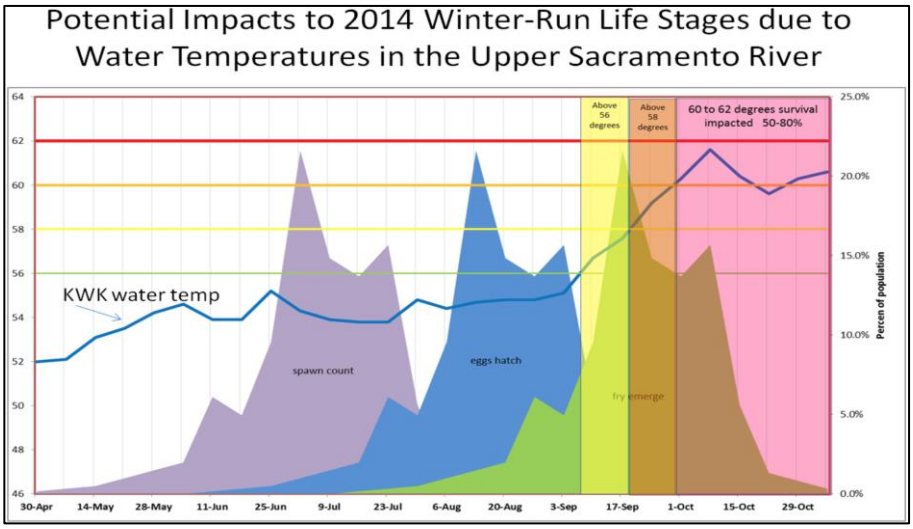


Figure 13. 2014 Winter-run salmon spawning, hatching and emergence. From 18 February 2015 NMFS Presentation to SWRCB.

The situation was similar in 2015. The SWRCB relaxed temperature criteria on the Sacramento River eliminated critical habitat, and USBR delivered 1.1 MAF of water to Sacramento Settlement Contractors and 103 TAF to Tehama-Colusa Canal from a reduced Shasta Reservoir storage. USBR's deliveries exhausted the cold-water pool and began releasing hot water from Shasta Reservoir, as occurred in 2014. A more comprehensive discussion of the circumstances surrounding the loss of cold-water is described by Tom Cannon in Summer Reservoir Releases – Lessons Learned #2.[37] Lethal water temperatures led to high temperature

[37] https://calsport.org/fisheriesblog/?p=3574

mortality. Winter-run Chinook salmon egg to smolt survival in 2015 was estimated by NMFS to be 3%, even lower than the 4% survival in 2014. Relaxation of Bay-Delta objectives decimated pelagic species. CDFW's FMWT Delta smelt index was a record low, down from the previous record low in 2014. The longfin smelt, striped bass and American shad indices were also record lows, and the splittail index tied a record low. Moreover, even the relaxed Bay-Delta objectives were violated. Again, a more comprehensive description of impacts to Chinook salmon and pelagic species from the SWRCB's weakening of temperature and Delta standards are described in the 17 June and 6 August 2015 Protest, Objection, Petition for Reconsideration and Petition for Hearing,[38] and the 22 July 2015 and 2 August 2015 Complaints against the SWRCB and USBR.[39]

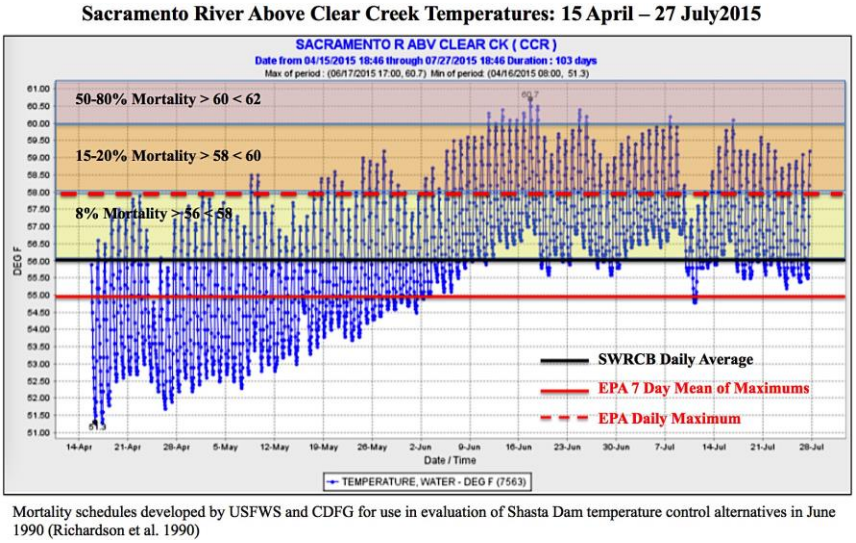


Figure 14. Summer 2015 Sacramento River Water Temperatures and Winter-Run salmon mortality

D. The State Water Board Has Failed to Enforce Water Quality Standards.

The SWRCB has a long history of ignoring violations of Delta water quality requirements. Water quality standards were adopted and implemented to protect public trust resources and the full suite of beneficial uses. Bay-Delta water quality standards already provide

38 https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/cspa_billjennings080615.pdf
https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/cspa_billjennings061715.pdf

39 https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/cspa_jennings072215.pdf
https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/cspa_complaint080315.pdf

for dry and critical water years. Further weakening of these dry and critically dry standards causes unreasonable and devastating impacts.

For example, in 1989-1991, the Board identified 246 violations by DWR and USBR of west Delta salinity standards, but declined to take enforcement action. Letter from SWRCB Chair Don Maughan to Roger Patterson (USBR) and David Kennedy (DWR), 19 June 1992. The egregious and chronic violation of south Delta water quality criteria illustrates the reluctance of the SWRCB to hold DWR and USBR accountable for complying with water quality criteria.

The present water quality standards for salinity for the south Delta were established in the 1978 Bay-Delta Plan and Water Rights Decision D-1485 in 1978. They were readopted in the 1995 Water Quality Control Plan in 1995 and Water Rights Decision D-1641 in 2000. D-1641 established a time schedule for compliance schedule of 2005. Provisions in the 1995 Bay-Delta Plan were readopted in the 2006 Bay-Delta Plan. The 1995 Plan made DWR and USBR jointly responsible for meeting the salinity standard in the south Delta, and USBR solely responsible for meeting the standard at Vernalis.

These salinity standards were routinely violated. In 2006, the SWRCB issued a Cease and Desist order against DWR and USBR for violations of the salinity standard and granted a time extension until 2009. Salinity standards continued to be violated. In 2010, the SWRCB issued an order modifying the 2006 Cease & Desist Order. It delayed compliance until after the SWRCB updates the 2006 Bay-Delta Plan, which was anticipated to be completed and incorporated into water rights permits by 2013. The present effort to update the Bay-Delta Plan is stalled and far behind schedule. Salinity violations continue to occur. DWR and USBR violated salinity standards on 868 days between April 2007 and March 2013. Salinity standards at all four compliance locations in the south Delta were violated in the winter-spring of 2015, and the salinity standard at Old River near Tracy was violated throughout 2015. The 2015 TUCO's ignored the south Delta salinity standards, treating them as if they didn't exist.

The SWRCB has failed to comply with mandates to conduct triennial reviews of the Bay-Delta Plan. Consequently, the water quality standards for protection of water quality and beneficial uses of Delta waters remain unchanged from 1995, despite plummeting fisheries and declining water quality; these declines are documented in low fish abundance indices and the increasing number of identified water quality impairments on California's CWA Section 303(d) List/305(b) Reports. While the SWP and CVP have operated under water quality criteria developed in 1995 and water rights provisions of D-1641 issued in 2000, fishery populations have continued to plummet. The SWRCB's refusal to enforce water quality criteria in 2013 and its weakening of minimal, inadequate standards in 2014 and 2015 exacerbated conditions. To weaken them again in 2021 would further reduce already seriously depressed fish populations and potentially catapult Delta and longfin smelt and winter-run salmon into extinction.

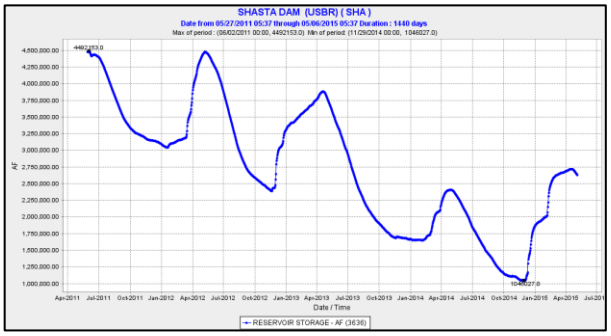
E. Water Agencies Continue to Deny the Frequency and Inevitably of Droughts.

Droughts are a routine occurrence in California's Mediterranean climate. According to DWR, there have been ten multi-year droughts of large-scale extent in the last 100 years spanning 41 years, including 1918-20, 1923-26, 1928-35, 1947-50, 1959-62, 1976-77, 1987-92,

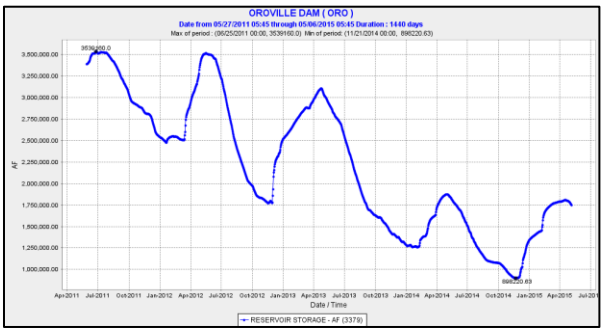
2000-02, 2007-09, and 2012-15. Below normal water years occur more than half the time, and natural ecosystems have evolved and adjusted to periodic droughts.

The inevitability of drought was extensively discussed during the numerous workshops and evidentiary hearings before the SWRCB over the last four decades during development the various iterations of Bay-Delta Plans and implementing water rights orders. It was discussed in the evidentiary proceeding leading up to D-1641. In D-1641, explicit provision was made for critically dry years, which included substantially less stringent, and consequently less protective, water quality and flow objectives. Yet the SWRCB has ignored or weakened those criteria in each of the last three dry year sequences.

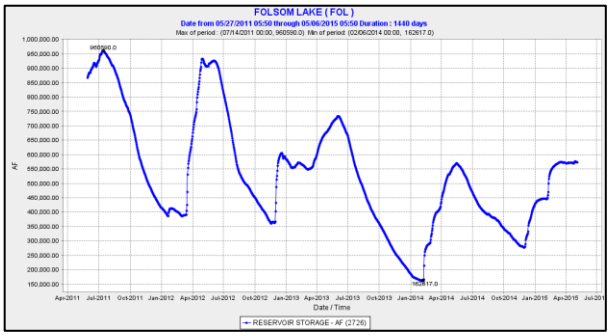
Over the last several years, in workshop and protests, petitioners CSPA et al. have described the prevalence of drought in California and pointed out that the state and federal Projects continue to operate and deliver water as if there is no tomorrow. The Projects draw down reservoir water under the assumption that the coming year will be wet, leaving little reserve storage in the event they're wrong. And in the event of another dry year, they again endeavor to maximize deliveries in the hope that rains will return. The pattern has repeated itself for decades: 1976-1977, 1986-1992, 2001-2002, 2007-2009, 2012-2015 and yet again in 2020-2021. This predictable pattern is not limited to state and federal Project reservoirs: it is replicated on reservoirs throughout the state, as evidenced by the following charts of storage between April 2011 and April 2015.



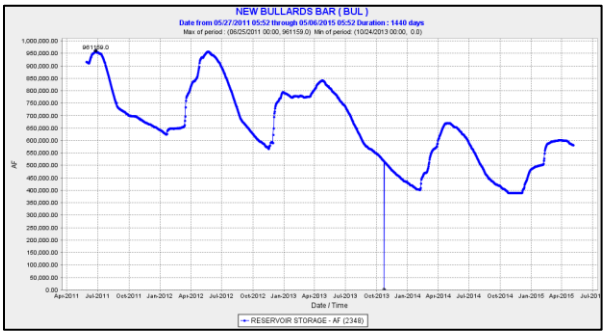
Shasta Reservoir



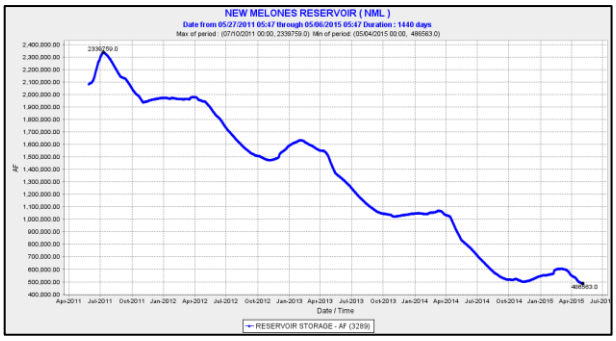
Oroville Reservoir



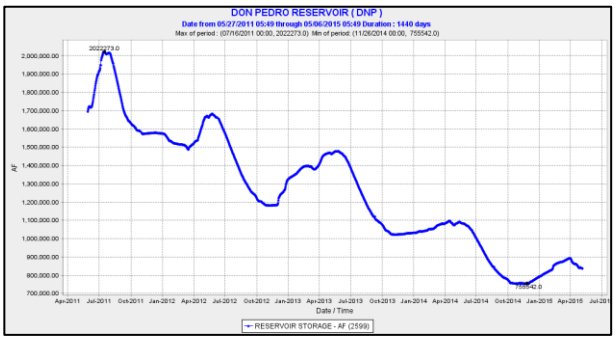
Folsom Reservoir



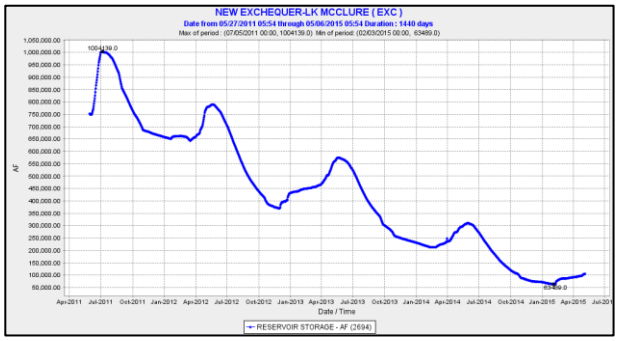
New Bullards Bar Reservoir



New Melones Reservoir



Don Pedro Reservoir



New Exchequer Reservoir

Figure 15. 2011-2015 storage hydrographs from major Central Valley reservoirs.
(figure begins on previous page)

Given DWR and USBR's projected 2021 end-of-September storage levels of 1.25 MAF in Shasta, 850 TAF in Oroville and 200 TAF in Folsom, another dry winter will create a disaster for fisheries, farms and cities throughout California.

Shasta Reservoir storage on 3 April 2021 was 2.39 MAF or 53% of reservoir capacity and 65% of average storage. Assuming that the SWRCB would agree with proposals to relax temperature standards on the Sacramento River and weaken water quality standards in the Delta, USBR ramped up water releases from Shasta Reservoir and significantly increased water deliveries to Sacramento River Settlement Contractors. Measured as the difference between in flow between Bend Bridge and Wilkins Slough, approximately 107.6 and 254.5 TAF were delivered to Sacramento Settlement Contractors in April and May 2021, respectively. These excessive deliveries reduced Shasta Reservoir storage to 1.97 MAF on 1 June, or 43% of capacity and 51% of average storage.

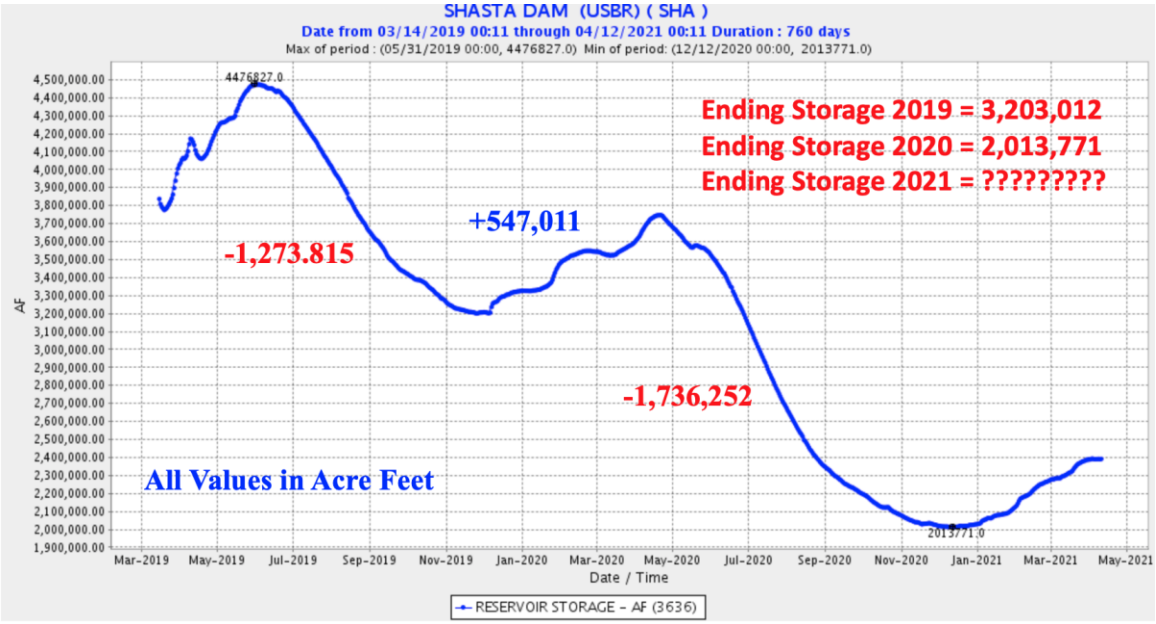


Figure 16. Shasta Reservoir Storage 2019-2021

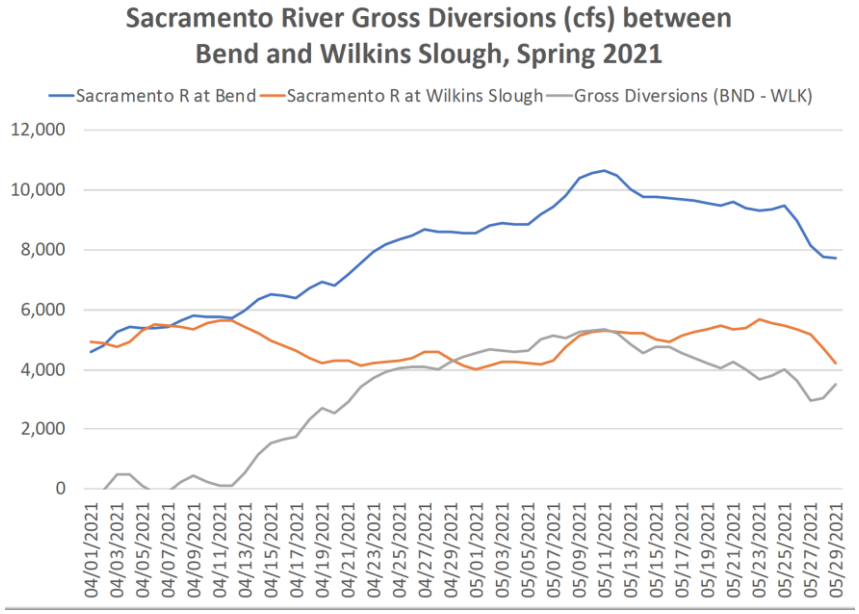


Figure 17. Spring 2021 Sacramento River diversions

The water released from Shasta Reservoir in May 2021 exceeded the 56ºF water quality standard for Chinook salmon and the 53.5ºF level protective of salmon eggs at all of the temperature compliance points. CDFW carcass survey teams collected dead endangered and unspawned winter-run Chinook Salmon and reported seeing other salmon swimming erratically.

DWR and USBR refuse to adjust to California's climate and over-subscribed system because they count on the SWRCB to bail them out during droughts by weakening water quality and flow criteria. And they've been right, and the SWRCB continues to bail them out by relaxing criteria and encouraging them to continue to operate on the edge of crisis. They count on CDFW, USFWS and NMFS to bail them out during droughts by agreeing that their proposals to weaken standards do not contravene the respective biological opinions. And they've been right that the fishery agencies will continue to provide concurrence memos within a day or two, while the Valley's pelagic and salmonid fisheries continue their inexorable march toward extinction. It is always the Delta and Central Valley fisheries and beneficial uses that pay the price.

The rapidity of the decision-making process to weaken criteria is breathtaking. The process from a TUCP through concurrence memos to the TUCP is complete within several days. It is accomplished in secret, the public is always excluded, and there is never an evidentiary proceeding that might raise embarrassing questions. Occasionally, the SWRCB will schedule an after-the-fact workshop. It cannot be claimed that an emergency exists, because the scenario has replicated itself multiple times over many years. It does suggest that the SWRCB, DFW, USFWS and NMFS have become captive agencies to politically powerful interests and incapable of independent action to protect public trust assets.

Fishery resources have been disproportionally impacted by drought because of increased consumptive use of water and the failure of the SWRCB to adjudicate water right claims that exceed average unimpaired flow in the Delta and tributary streams fivefold. In fact, as the chart below demonstrates, Fisheries dependent on Delta outflow have endured the functional flow equivalent of super critical drought conditions in half of all years since 1975.

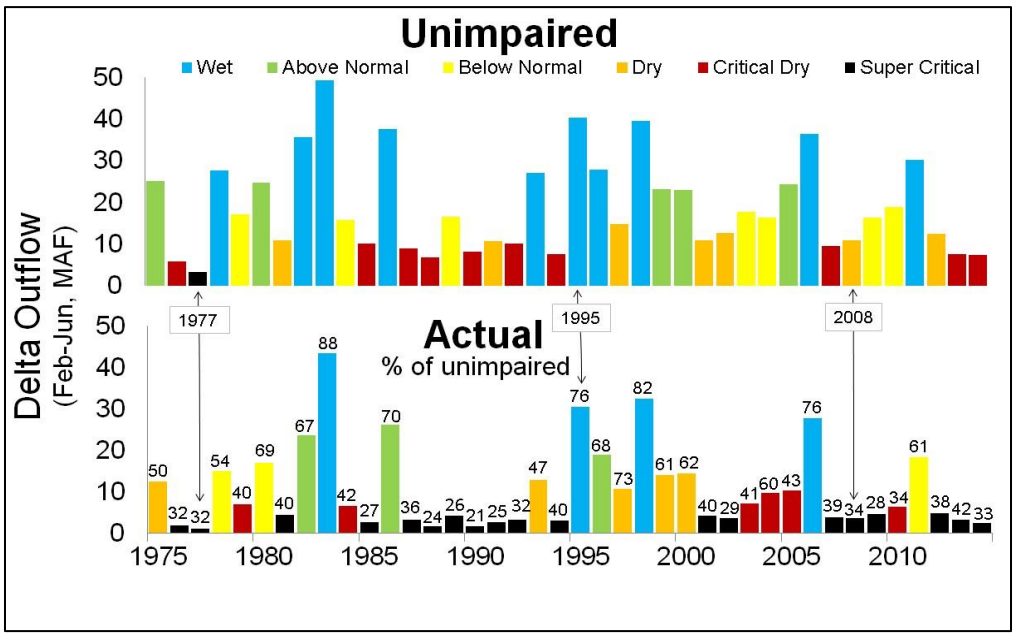


Figure 18. Actual Flow to the Bay vs. Unimpaired Flow. Bay Institute, 2015.

F. Health and Safety Needs During the Drought are Not Identified.

The SWP/USBR 2021 Drought Contingency Plan and TUCP and the SWRCB's TUCO justifies much of the proposed export pumping, when flow and water quality criteria are weakened, as required because of health and safety needs. Yet, there is no quantification of the amount of water needed for health and safety.

That was not the case in 2015. The need for water for health & safety purposes was described in DWR/USBR's Central Valley Project and State Water Project Drought Contingency Plan January 15, 2015 – September 30, 2015. DWR's state contractors reported health and safety needs of 330 thousand acre-feet (TAF), while USBR's federal contractors reported that they needed 180 TAF for health and safety.[40]

VI. Conditions Under Which This Protest, Objection and Petition for Reconsideration May Be Disregarded and Dismissed.

The State Water Board should deny the TUCP and rescind the Executive Director's Order that conditionally approved the TUCP. In their place, the State Water Board should order the following measures to protect fish and wildlife for the remainder of 2021:

1. The State Water Board should reinstate D-1641 critical year criteria.

2. The State Water Board should order the operations of Shasta and Trinity reservoirs and downstream river reaches recommended in the CSPA Temperature Management Plan, including:

    a. Limit Shasta releases in the months of June through October to 5000 cfs.
    b. Require minimum end-of-September carryover storage in Shasta Reservoir of 1350 TAF in 2021 and 1900 TAF in 2022.
    c. Require minimum end-of-September 2021 carryover storage in Trinity Reservoir of 900 TAF.
    d. Limit Trinity River exports to the Sacramento River to 300 cfs in the months of June through October, and require release of these exports down Clear Creek, with no releases during this time period through the Spring Creek Tunnel.
    e. Require Trinity River releases in the months of June through October of 800 cfs or the flows required by the Trinity Record of Decision of Lower Klamath Record of Decision, whichever is greatest.

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[40] DWR/USBR, *Central Valley Project and State Water Project Drought Contingency Plan January 15, 2015 – September 30, 2015*, pp. 5-6. https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/2015_drought_contingency_plan.pdf

3. The State Water Board should limit deliveries to Sacramento River Settlement Contractors to the amounts they could reasonably receive under their underlying water rights.

4. The State Water Board should require the Bureau of Reclamation to meet Delta water quality requirements using water released from New Melones Reservoir to the maximum extent practicable.

5. The State Water Board should limit Delta exports to 1500 cfs including any transfers, and require compliance with D-1641 as a condition of any exports.

6. The State Water Board should disallow any water transfers of water that would otherwise not be available for diversion at the stated place of use while still complying with the public trust and reasonable use doctrines.

7. No later than June 30, 2021, the State Water Board should initiate water rights hearings on the 2009 petitions for extension of time of DWR for the SWP and Reclamation for the CVP. Such hearings are long overdue to address the chronic overallocation of water by the Projects and in particular their operations before and during dry and critically dry years and sequences of years.