



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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Nancy Vogel
Director of the Governor's Water Portfolio Program
input@waterresilience.ca.gov
Via e-mail

Re: Comments of the California Sportfishing Protection Alliance on the January 6, 2020 *Draft California Water Resilience Portfolio*

Dear Ms. Vogel:

The California Sportfishing Protection Alliance (CSPA) respectfully submits these comments on the January 6, 2020 *Draft California Water Resilience Portfolio*.

I. Introduction: The Draft Portfolio Is Built on Overappropriation of California's Water.

Executive Order N-10-19 issued by Governor Newsom on April 29, 2019 required the California secretaries of Resources, Environmental Protection, and Food and Agriculture to "together prepare a water resilience portfolio that meets the needs of California's communities, economy, and environment through the 21st century." The *Draft California Water Resilience Portfolio*¹ (Draft Portfolio) released by the Resources Agency on January 6, 2020 responds to Order N-10-19.

The Order requires, as an initial step, requires at § 2, in part:

These agencies shall first inventory and assess:

- a) Existing demand for water on a statewide and regional basis and available water supply to address this demand. ...
- c) Projected water needs in coming decades for communities, economy and environment.

The Draft Portfolio does not place an inventory and assessment of water supply and demand first in sequence or in concept. The Draft Portfolio's inventory and assessment is,

¹ <http://waterresilience.ca.gov/wp-content/uploads/2020/01/California-Water-Resilience-Portfolio-2019-Final2.pdf>

rather, in Appendix 3 Section 2. The Draft Portfolio's inventory does not provide the context needed so that California's decision makers can meet the state's water needs through the 21st Century. The Draft Portfolio's assessment does not analyze how California has overallocated its water resources so that supplies are chronically insufficient to meet demands, or what needs to be done to reduce those demands so that supplies and demands two match up.²

If this were a financial portfolio, no responsible contributor would begin without an accounting of assets and liabilities. One would not simply make a list of water demands and talk about where they may go in the future, and make a list of supplies and talk about where they may go in the future. One would compare the two. In finances, it's called a balance sheet.

If this were a financial portfolio, no responsible contributor would accept a situation where liabilities consistently grow whenever more assets become available, which is exactly how California's water has developed for over a century. On the contrary, a responsible financial planner would take measures to correct the structural deficit.

But California's water managers have never faced such a basic accounting. This Draft Portfolio had the opportunity, indeed the responsibility, to show the systemic unsustainability of the existing defaults of California's water supply and demand. It does not.

Recently, California has seen how relying on the assumed soundness of the foundation of the electrical distribution system can lead to disastrous consequences. The acceptance of existing defaults for California's water and its use will lead to its own set of disasters.

Behind the Draft Portfolio's silence about the running balance of water assets and liabilities is a real conflict. It is a conflict between the continued overallocation and overappropriation of California's water resources and a solution that would bring water use into line with California's hydrological means.

II. The Draft Portfolio Relies on Key Concepts that Assume Overappropriation.

Neither the main text of the Draft Portfolio nor its Appendix 3 Section 2 defines key concepts, including the concept of sustainability. However, the first document cited in the references to Appendix 3 Section 2 is the *California Water Plan Update 2018: Managing Water Resources for Sustainability*³ published in 2019 by the California Department of Water Resources (DWR). This latter document contains a series of definitions of key concepts,

²See e.g., Theodore E Grantham and Joshua H Viers, *100 years of California's Water Rights System: Patterns, Trends and Uncertainty*, 2014, available at: <https://iopscience.iop.org/article/10.1088/1748-9326/9/8/084012/pdf>. See also Tim Strohane, *Testimony on Water Availability Analysis for Trinity, Sacramento, and San Joaquin River Basins Tributary to the Bay-Delta Estuary*, 2012, esp. Tables 1 and 2, p. 12. Available at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/ResortotheDelta/RTD_131.pdf

³DWR, *California Water Plan Update 2018: Managing Water Resources for Sustainability*. Hereinafter, "2018 Water Plan Update." Available at: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/California-Water-Plan-Update-2018.pdf>.

including many also used in the Draft Portfolio.⁴ A good way to understand the state’s approach to managing water resources is to look at the definitions of some key concepts that DWR provides in the 2018 Water Plan Update.

The 2018 Water Plan Update defines sustainability as follows:⁵

“Sustainability: Sustainability of California’s water systems means meeting current needs — expressed by water stakeholders as public health and safety, healthy economy, ecosystem vitality, and opportunities for enriching experiences — without compromising the needs of future generations.”

For such a key concept, this definition is remarkably unclear. In addition, it relies on terms that themselves are also undefined. Sustainability means meeting current needs, bounded only by meeting future needs. So what are “current needs?” Does “current needs” mean meeting the current level of water demand? Does “current needs” mean water supply for the current level of agricultural development, or would less water delivery still provide a “healthy economy?” Is the “current need” for “ecosystem vitality” the existing degraded condition of river, Delta and Bay ecosystems? While a clever lawyer could perhaps argue differently, the immediate sense of “meeting current needs” means meeting current needs as they present themselves today: meeting current demands for water.

Looking at it differently, consider what sustainability under this definition is not: a water system in which supplies are in balance with demands. Simply by defining sustainability as something that is not a balanced water budget, DWR assures that sustainability does not mean that. Thus, the definition and sloppy framing of sustainability in itself becomes one of the biggest obstacles to sustainability.

Additional clarity is available in considering other definitions. “Water demand” and “water supply reliability” are particularly enlightening:

“Water demand: The desired quantity of water that would be used if the water were available and if a number of other factors, such as price, did not change. Demand is not static.”

“Water supply reliability: Percentage of the time water supplies meet demands.”

So: “reliability” does not mean having a demand for water that “California’s water systems” can reliably meet. It means meeting demand as often as possible even if that demand is beyond the means of the systems to consistently provide it. This definition precludes defining

⁴ Nancy Vogel, Director of the Governor’s Water Portfolio Program, told several NGO’s in 2019 that the California Department of Water Resources (DWR) would complete the inventory and assessment of current and future demands and available supplies. The Draft Portfolio does not state whether DWR did in fact assemble Appendix 3B. But Appendix 3B is consistent with the approach that DWR would be likely to take. DWR is a department under the California Department of Natural Resources, one of the agencies that produced the Draft Portfolio.

⁵ 2018 Water Plan Update, *op. cit.* Definitions are on pp. xiv-xv (15-16 in pdf pagination).

reliability as bringing demands into line with supplies. Stated differently, the definition of water supply reliability precludes a demand-reduction strategy for ensuring “water supply reliability.”

These are some of the key “existing defaults of water supply and demand” mentioned above. The Draft Portfolio is entirely consistent with these defaults.

A final key concept to consider is the meaning of a “water portfolio,” a definition that the 2018 Water Plan Update does not provide. One generally thinks of a portfolio as a framework for organizing assets. But the water portfolio in California runs on what has become a permanent deficit basis. Even really abundant water years like 2017 and 2019 can’t make up the shortfall of constantly over-delivering water in the 75% or so of water years in which precipitation is not abundant. Developing a new portfolio that maintains or increases the cumulative water debt is more a framework for managing a loan and redistributing debt than investment for a prosperous future. It is not a portfolio at all.

In sum, accepting key concepts in a way that looks only at maintaining or increasing existing levels and sources of water supply deflects different ways of looking at the problem. California’s water portfolio today is a portfolio of deficits. Discussing a “water resilience portfolio” that doesn’t start by acknowledging and seeking to address the cumulative water debt will only postpone the day of reckoning (likely a crisis precipitated by drought or other disaster). It won’t be sustainable because the state is close to tapping out new sources for borrowing water. It won’t be resilient because the crash will come: slowly at first, then quickly.

III. Overallocation and Overappropriation of California’s Water Is a Systemic Condition.

The overallocation and overappropriation of water in California is a systemic problem. It arises from the way California’s officials have chosen to manage and regulate water. As it was established, California’s water law encouraged this overappropriation. The priority system of appropriative water rights in its original and unchecked form placed no limits on diversion of water except injury to other legal users of water. Unless diverters took water away from others, they could run rivers and streams dry. Riparian water rights equally limited diversions only to the degree that one could not injure other riparian users. The contract system of the Central Valley Project and State Water Project continued the approach: they allow delivery of as much water as the Bureau of Reclamation (BOR) and DWR can capture and convey.

Such unchecked conditions have been modified (at least potentially) by a number of actions. Penal Code § 637 was modified in 1915 to require dam owners to release enough water to keep fish downstream in good condition. Today, its successor, Fish and Game Code § 5937, maintains that requirement. In 1928, California amended its Constitution to require that use of water be “reasonable.” The California Supreme Court in *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 (Audubon decision) gave judicial recognition in California law to the public trust, finding: “The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.” The Delta Reform Act of 2009 explicitly affirmed: “The longstanding constitutional principle of reasonable use and the public trust doctrine shall be the foundation of state water

management policy and are particularly important and applicable to the Delta.” (Water Code § 85023). The California Court of Appeals affirmed in *Light v. State Water Resources Control Board* (2014) (226 Cal.App.4th 1463) the broad reach of the doctrine of reasonable use, and reaffirmed that “when the public trust doctrine clashes with the rule of priority, the rule of priority must yield.”

Much of California’s groundwater is also overappropriated. Until 2014, there was little statutory regulation of groundwater. Regulation was generally limited to isolated geographic areas subject to court-directed adjudication. That changed with the passage of the Sustainable Groundwater Management Act in 2014. This law portends real limits on the appropriation of groundwater.

The interpretation and reluctant implementation of foundational laws and decisions that should protect ecosystems and public values has ceded the upper hand to the overallocation of the state’s surface water. Similarly, water users are now setting themselves up to use the laws governing the appropriation of groundwater to preserve their stranglehold on the public’s water. Above all, water users are gaming the system so they can rob Peter to pay Paul. Groundwater users are trying to divert overappropriated surface water to “replenish” or more accurately backfill overappropriation of groundwater. Surface water users are exploiting the new rules governing groundwater to advocate for increased surface water diversions and water transfers and sales to the overappropriators of groundwater.

New, vigorous interpretation and implementation of foundational laws and decisions can reverse overallocation and overappropriation without fundamentally changing the law. This is the appropriate legal and cultural foundation for a water portfolio for the 21st Century. It is the necessary basis of sustainable water management and use. The Draft Portfolio fails to address the overallocation and overappropriation of water and fails to address the “affirmative” legal requirements that the state do so.

IV. **Rivers and Estuaries Are Starved of Flow; Land Is Sinking and Wells Are Running Dry.**

The unmistakable evidence of the overappropriation of surface water in California is ecosystem collapse. The Executive Order requiring development of a water resilience portfolio acknowledges “native fish populations threatened with extinction.” But the Draft Portfolio does not make the connection between ecosystem collapse and the over-diversion of water. The State Water Board’s 2010 *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*, in contrast, recognized the connection, at least indirectly: “Recent Delta flows are insufficient to support native Delta fishes for today’s habitats.”⁶ The 2010 Report was far from the first time the overappropriation of water was brought before the state. In the State Water Board’s 1987 hearings on the Bay-Delta Water Quality Control Plan, the Romberg Tiburon Center for Environmental Studies submitted a report that stated the problem succinctly:

⁶ SWRCB, *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*, p. 5. (Hereinafter, *Delta Flow Criteria Report*). Available at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/swrcb_25.pdf

“Published results regarding water development in rivers entering the Black Sea, Sea of Azov, Caspian and Mediterranean Seas in Europe and Asia all point to the conclusion that when successive spring and annual water withdrawals exceeded 30% and more than 40-50% of the normal unimpaired flow respectively, (computed as the average for 50-60 years of observations), water quality and fishery resources in the river-delta-estuary-coastal zone (ocean) ecosystem deteriorated to levels which overrode the ability of the system to restore itself.”⁷

The unmistakable evidence of the overappropriation of groundwater in California is sinking groundwater levels, shallow wells running dry, and land subsidence due to overpumping of groundwater in the San Joaquin Valley and in some other regions. Further unmistakable evidence of the overappropriation of groundwater is also, as with surface water, ecosystem collapse. However, this line between ecosystem collapse and groundwater is often less direct, because it runs through surface water diverted to areas where groundwater has reached severe overdraft.

Marx Arax, in his 2019 book “*The Dreamt Land, Chasing Water and Dust Across California*,” describes in extensive detail how overdraft of groundwater in the southern San Joaquin Valley precipitated the construction of the Central Valley Project (CVP),⁸ aptly titling one of his chapters “Steal Us a River.” Mr. Arax describes how the CVP ran the San Joaquin River dry in order to maintain the citrus orchards of the east side of Fresno, Tulare and Kern counties that had pumped the life out of their aquifers. He describes how the CVP also diverted water from the Sacramento River at the Delta to re-supply the diverters who had previously diverted from the lower San Joaquin.

The paradigm has repeated itself several times over. The CVP dammed the Trinity River to divert water to the west side of the San Joaquin Valley. The State Water Project tapped the Feather River to supply southern California and more of the southern and western San Joaquin Valley.

Mr. Arax further describes how the agricultural industry in the southern San Joaquin Valley has used new surface water supplies over the last eighty years. New surface water did not become a drought reserve or a source to bring groundwater back to reliable levels. It became instead a new source of water for new acreage and for conversion of acreage to tree crops with a hard demand. This led to greater, not less, overdraft of the depleted aquifers whose replenishment was the ostensible purpose of new surface supplies in the first place.

⁷ Rozengurt, Michael, Herz, Michael J., and Feld, Sergio, “*Summary, The Role of Water Diversions in the Decline of Fisheries of the Delta - San Francisco Bay and other Estuaries*,” September, 1987. Technical Report 87-8. Exhibit 21 of the Romberg Tiburon Center for Environmental Studies in the SWRCB Water Quality Control Plan hearings, September, 1987. (Exhibit TIB-21). Page 1. Available at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/exhibits/sj_fld_cntrl/sj_c_etal_exhibit11.pdf

⁸ Mark Arax, *The Dreamt Land: Chasing Water and Dust Across California*, Alfred A. Knopf, New York, 2019.

The San Joaquin Valley Water Blueprint⁹ is the modern inheritor of the business model of maximizing surface diversions in order to sustain agriculture founded on overtapped aquifers. The belief in the method overwhelms the inconvenient fact that there is little water left for the Blueprint's architects to take. The goal is to squeeze out the last drops of unregulated surface water in the Central Valley, and perhaps to mine the aquifers of the Sacramento Valley for export as well. Implementation of the Blueprint might sustain the unsustainable for another twenty years and postpone the day of reckoning for the addicts of water debt. The exorbitant costs make the program feasible only if it funded by taxpayer money, but there is nothing new in that part of the business model either.

V. **A Case Study from the Administration of Surface Water Rights Shows the Systemic Imperative to Overappropriate Water.**

In 2010, the State Water Resources Control Board held a hearing regarding the joint application of the cities of Davis and Woodland for a new water right. Davis and Woodland argued that water is available for appropriation under the existing (inadequate) constraints designed to protect fish and wildlife in the Sacramento River and the Delta. They argued that the State Water Board should therefore grant Davis and Woodland a new right to divert up to 45,000 acre-feet of water per year from the Sacramento River. Protesting the application, CSPA argued that public trust resources were already collapsing. CSPA further argued that the Water Board should not issue new water rights until it had completed public trust balancing for the Central Valley. As CSPA stated in its testimony, “[t]he first law of holes is: stop digging.”

As described above, the State Water Board had issued earlier in 2010 its legislatively mandated *Delta Flow Criteria Report*. That report stated said that to protect and restore fish in the Bay-Delta estuary, the Water Board needed to require that 60-75% of the unimpaired January-June flow be allowed to pass into the Delta and out of the Delta into the Bay. At the Davis-Woodland hearing, the State Water Board considered the likelihood that it would at some future time mandate more stringent requirements to protect fish in the future. Davis and Woodland's attorneys argued that even if the criteria in the *Delta Flow Criteria Report* were adopted as requirements, there would still be *some* water available for Davis and Woodland sometimes, such as during storms or a series of storms. The theory was that when there was no water left in the Sacramento River that wasn't already spoken for, Davis and Woodland would find alternative sources of water or pump groundwater.

The Water Board took the easy way out. It did not consider for this hearing the crash of fisheries in the Bay-Delta and Sacramento River watersheds. It refused to look to the day that it would balance the public trust in the Bay-Delta estuary. So the State Water Board granted the permit.¹⁰ The Board said some water was available for appropriation. The Board said that the

⁹ The San Joaquin Blueprint is still a work in progress. Its broad outline can be seen at pp. 61-67 of the June 6, 2019 meeting packet of the San Luis and Delta-Mendota Water Authority. Available at: http://www.sldmwa.org/OHTDocs/pdf_documents/Meetings/Board/Prepacket/2019-06-06_BOD_Complete_Pre_Packet.pdf

¹⁰ See Water Rights Decision 1650. Available at: https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1650_d1699/wrd1650.pdf

risk was on Davis-Woodland and theirs to take or not, and that the risk included reduced water availability under new Delta requirements for fish protection.

This in a nutshell describes the systemic demand to increase diversions of water. More water is promised than is available. The theory is that those at the end of the water rights line (the “junior” diverters) will have to do without water when water is short. In some cases, for “riparian” diverters whose right to divert stems from the presence of a river or stream on their property, they have to share limited water with the other riparian diverters.

So where does this leave the river or stream? It is generally allocated a “minimum bypass flow,” an amount of flow that must be left in the stream. It also gets any water that’s left over, not diverted. As demands increase (both new water rights and increasing diversions under existing water rights), there is less and less water left over, and ever more pressure to reduce the required minimum flow.

Regardless of the particular percentages of unimpaired flow recommended in the *Delta Flow Criteria Report*, that report created a different frame for public trust resource protection. It moved away from primary reliance on the minimum flow model to a real water budget for the public trust, a water budget that would come first, leaving appropriators, rather than rivers and the Bay-Delta estuary, to divide up what is left.

VI. The Draft Portfolio’s Inventory of Precipitation and Applied Water Is Misleading.

The series of graphics and charts on pages 53-57 (Appendix 3 Section 1) of the Draft Portfolio is confusing and misleading. The figures are of limited utility in evaluating the impacts of water development to public trust resources in particular, because they do not compare “applied water” with the unimpaired flow in California’s rivers and streams.

Instead of describing how much water enters California’s waterways, the Figure 1 on page 53 shows estimated precipitation and then backs out the estimated reduction of that figure that is consumed by evapotranspiration. While this may be of limited potential utility in considering forest management, it is unclear whether this evapotranspiration varies year-by-year and thus what it is in any given year.

It is also unclear why water in “wild and scenic rivers,” undiverted water that is left in rivers, mostly on the North Coast, is counted as “applied” or “dedicated” water in statewide breakdowns of water use. Including this water in a pie chart with consumptive uses of water statewide presents a particularly misleading picture of the level of development of water in the Central Valley.

For those sections of “wild and scenic rivers” in the Central Valley, it appears that their flows are double-counted, since these sections of river are upstream of points of diversion and are subject to appropriation once they pass downstream of designated areas.¹¹ The use of the

¹¹ See e.g., water classified as “Wild and Scenic River” in figures at the bottom of pages 72, 84 and 96.

“wild and scenic rivers” as a descriptor for water use in general, and for inclusion with “applied water use” in Figure 2 on page 54 in particular, is confusing and inappropriate.

The use of the term “remaining water” in the pie charts in Figure 1 is even more confusing. Presumably, “remaining water” refers to water not lost to evapotranspiration. However, the numbers on page 53 do not add up. For example, after one backs out evapotranspiration (assuming 55% based on the example presented), there is more than 92.7 acre-feet “remaining” in 2011. It is unclear whether the difference is water that remains in the river as unregulated flow or whether some of the water in the pie chart is double-counted.

A more transparent way to describe water use would be to use estimated unimpaired flows for each region and show what percent of it was diverted for which uses. While it is useful to describe the amount “dedicated” to instream flow or Delta outflow, it is also important to account for “unregulated” or uncaptured water that remains in rivers or waterways but is not required to remain there. This unregulated water is often of greater benefit to instream resources than water that remains in rivers due to regulatory requirement.

Reis et al. (2019) describe how dedicated flows account for only part of the flows into and through the Bay-Delta Estuary.¹² Table 7 in Reis et al. shows that an average of less than 15% of the unimpaired flow from the Bay-Delta watershed in 2010-2018 ended up as Delta outflow, except in wet years. Even with the two very wet years 2011 and 2017 included, outflow over the nine year period averaged just 35.7% of unimpaired flow. These metrics are an effective way to demonstrate both the value of unregulated flow and the degree to which the Bay-Delta watershed’s resources are overappropriated in all years except perhaps very wet years. This unregulated flow is also that which new and existing water diverters may see as potential future additions to water supply.

A second version of the Draft Portfolio should rework the confusing graphics on pages 53-57. It should also supplement the inventory using the analysis in Reis et al. (2019) as a template for a more representative description of the allocation of California’s water resources.

VII. Appendix 3 Section 2 of the Draft Portfolio Is All Inventory and No Assessment.

Appendix 3 Section 2 of the Draft Portfolio is a glossy inventory of water supplies and demands with no assessment. It fails to draw basic conclusions about structural water debt. It assumes the structural water debt as a given that will change over time primarily due to market dynamics but that will not go away.

Many non-governmental organizations engaged in California water policy are aware of the structural water deficits that exist in California’s physical and regulatory water system today. Many NGO’s were hopeful that the Governor’s Order to prepare a water resilience portfolio would begin with an assessment of this deficit. This would enable sober evaluation of various actions and projects based on a new comprehensive understanding of California’s system of

¹² Gregory J. Reis, Jeanette K. Howard, and Jonathan A. Rosenfield, *Clarifying Effects of Environmental Protections on Freshwater Flows to—and Water Exports from—the San Francisco Bay Estuary*, San Francisco Estuary and Watershed Science, March 2019. Available at: <https://escholarship.org/uc/item/8mh3r97j>.

water. The value and need for a tunnel to convey water under the Delta, for example, is linked to the demand it would serve, the sustainability of that demand, and alternatives for meeting the sustainable portion of that demand.

In addition to the threshold question of the need for a Delta tunnel is the question of how it would be used and operated. In the previous administration's advocacy for a twin tunnel project, DWR largely promoted the narrative that the tunnels would provide reliability for existing levels of water deliveries, not increase those deliveries. Opponents pointed out that with no operations plan for the tunnels and an insatiable thirst south of the Delta, the narrative that there would be no net increase in Delta exports had no credibility. The Draft Portfolio does nothing to change that conclusion. On the contrary, the Draft Portfolio's silence on California's structural water deficit reinforces the conclusion that DWR will use a single tunnel to increase the amount of water it takes out of the Delta. Changing the size and shape of a proposed new conveyance under the Delta does not change its purpose.

Failure to assess assets and liabilities leads to other bad choices as well. As a general matter, the Draft Portfolio is all in favor of water transfers. It wants to make transfers easier administratively and physically. There is no analysis of where the water would come from or go to. Much of the water that is transferred is water not needed for the ostensible uses for which water right or contract holders appropriated it in the first instance. It is the water that is most easily available to restore to the public trust. With the exception of some urban water purveyors who use transfers to shore up dry year supplies, transferred water is also destined as a general matter for recipients whose business models are marginal or unsustainable.

Equally, the Draft Portfolio's endorsement of Sites Reservoir (Section 7.1) is founded on the outdated notion that there is more benefit to having storage for "the environment" than to not diverting unregulated water from "the environment" in the first place. Sites Reservoir would amount to a net loss in Sacramento River flow and a net loss in Delta outflow. The proponents of the Sites project have no operations plan for the facility and have not even a rudimentary explanation for why more water diversion would improve anything in a river or in the Delta.

VIII. California Must Invest in Reducing Water Demand and Managing the Transition.

Adding a series of good projects to a portfolio founded on water debt does not balance or offset the fundamental structural problem of California's overallocated and overappropriated water system. The Draft Portfolio proposes many actions that in and of themselves would be good things to do. But even as the state may do some of those good things, implementation of the Draft Portfolio will increase the systemic pressure to divert more water. In both the long and the short terms, that will defeat the broad goal to "protect and enhance natural systems."

The trajectory of the Draft Portfolio also preempts actions that would mitigate the impacts to irrigated agriculture of the need to do more with less. A large-scale managed recharge and groundwater banking project in Stanislaus County, for instance, could improve recharge efficiency over the present reliance on flood irrigation. This could both reduce overall water use with little reduction in acreage and allow restoration of flow to the lower Tuolumne

River with minimal economic impacts. It also offers an opportunity for drought-year water supply reliability for the City of San Francisco and the Bay Area.¹³ This is the type of investment that California should be making in weaning itself off overappropriation of water and in restoring flow to the state's waters and aquatic ecosystems. But for this type of multi-benefit solution, the Draft Portfolio doesn't show up at all.

Equally absent in the Draft Portfolio is affirmative planning to diversify the economies of the San Joaquin Valley communities in particular that are going to be turned upside down by the reduction of irrigation water that is shown on page 61 for the San Joaquin and Tulare Lake regions. The market is already weeding out unsustainable farm operations. But leaving the market to cause adjacent communities to wither and die is cruel and irresponsible. A Water Resilience Portfolio has to include resilience for the communities that are left behind by necessary changes that bring water use into balance with reliable supply.

The need for California's water managers to respond to climate change makes it all the more important to confront the overallocation of water that climate change is likely to make even more unsustainable. Much of the focus of the Draft Portfolio is centered on adaptation to climate change. But much of the response is to double down on the mistakes of the previous century. California can neither dam nor divert its way to water resilience and sustainability.

Engineering fixes and improvements to water infrastructure itself will indeed be needed to respond to climate change, as the 2017 failure of the spillway on Oroville Dam demonstrated dramatically. The approach of waiting till it breaks and then rushing to fix it is dangerous, difficult and expensive. But any engineering project first must define what the project goals are and then design the project to fit the need. New investment in water infrastructure must be designed and sized for the water demands of the future, not for the unsustainable legacy of past overappropriation.

IX. A Revised Portfolio Must Be Grounded in a Balanced Water Budget.

A new draft version of the Water Resilience Portfolio should start by completing the answer to the initial tasks in the Governor's April 29, 2019 Order. It should perform an inventory *and assessment* of existing water supply and demand, including a sober analysis of how much water use the state's resources can consistently support. It should base its projection of future supplies and demands on the premise that California must live within its hydrological means. It should base its planning on a water budget that California can afford.

Respectfully submitted,



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California Sportfishing Protection Alliance

¹³ For details and analysis, see *Comments and Recommendations of Conservation Groups on Ready for Environmental Analysis, P-2299 and P-14581*, pp. 7-30. Available at: https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20180129-5200