

State of California  
State Water Resources Control Board  
DIVISION OF WATER RIGHTS  
P.O. Box 2000, Sacramento, CA 95812-2000  
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**PROTEST**

**Based on Environmental Considerations, Public Interest, Public Trust, and Other Issues**

**APPLICATION A025527 – SITES RESERVOIR**

We, Eric Buescher of San Francisco Baykeeper, Gary Bobker of The Bay Institute, Ashley Overhouse of Defenders of Wildlife, and Scott Artis of Golden State Salmon Association have read carefully a copy of, or the notice relative to, Application A025527 of Sites Project Authority to appropriate: from the Sacramento River at Red Bluff Pumping Plant, at Hamilton City Pump Station, at Tehama-Colusa Canal, and at Glenn-Colusa Main Canal; from Funks Creek at the Golden Gate Dam; and from Stone Corral Creek at Sites Dam.

We protest the above application on Environmental Issues, including that the Application and Proposed Project will not best conserve the public interest, will have an adverse environmental impact and will adversely affect a public trust use of a navigable waterway. We also protest the above application on Other Issues because the Proposed Project is contrary to law.

The Statement of Facts in support of this Protest follows at pages 4 – 24, Exhibits A to F attached hereto, and the cited materials herein.

The Conditions under which this Protest may be disregarded or dismissed follow at pages 22 – 24.

A true and correct copy of this Protest has been served upon the Applicant by mail and electronic mail at the following address:

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*[signatures on following page]*

Respectfully submitted on the 31st day of August 2023, by:

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Scott Artis

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## **STATEMENT OF FACTS**

San Francisco Baykeeper, The Bay Institute, Defenders of Wildlife, and Golden State Salmon Association hereby protest the Water Rights Application, No. A025527 (“Application”) submitted by the Sites Project Authority (“Applicant”) for the proposed Sites Reservoir (the “Proposed Project”).

### **I. INTRODUCTION**

The best available scientific evidence, data, and information demonstrates that granting the Application would cause unreasonable impacts on fish and wildlife, would be contrary to law, and is not in the public interest. The science regarding protection of fish and wildlife beneficial uses and public trust resources should guide this decision, and the Application should be rejected. If the Application is approved, in whole or in part, Applicant’s water rights should be conditioned as described in Section IV, *infra*.

The San Francisco Bay-Delta ecosystem is in crisis—the result in large part of drastic reductions and alterations of river and estuary inflows. The State Water Resources Control Board (“Board”) has repeatedly found that existing water quality objectives and other regulatory requirements are inadequate to protect the public trust, preserve fish and wildlife beneficial uses, and comply with the law. Indeed, the state’s salmon fishery is completely shut down in 2023, due to low abundance of fall-run Chinook Salmon, eliminating thousands of jobs that depend on healthy salmon runs. Spring-run Chinook Salmon face a high risk of extinction in the next few years, with extremely low abundance and survival in recent years due to mismanagement of water resources during the extended drought. Delta Smelt, Longfin Smelt, and winter-run Chinook Salmon all face the prospect of extinction soon. White Sturgeon are imperiled because of inadequate river flows into and through the Delta that limit recruitment and migration success. And the impacts on human health and communities in Northern California, from the Delta to coastal communities, are just as severe.

The Board, state and federal agencies, and other scientists have repeatedly and definitively concluded that existing flows are not adequate and that increased flows and improved water quality are necessary to protect the Public Trust, designated beneficial uses, and to prevent extinction of native fish species. In the face of this reality, the Application is clear—Sites Reservoir would reduce instream flows and Delta outflows, further reducing the abundance and productivity of California’s native fish and degrading water quality conditions.

The Board should reject the Application because it unreasonably harms native fish and wildlife species, including Chinook Salmon, and it will negatively affect commercial and

recreational fisheries and other beneficial uses. This harms the environment and public trust resources.

In addition, the Board should reject the Application because the Proposed Project is contrary to law. Applicant and the Proposed Project fail to comply with the Endangered Species Act (“ESA”), California Environmental Quality Act (“CEQA”), the California Endangered Species Act (“CESA”), the requirements of Proposition 1 of 2014, and the Sacramento-San Joaquin Delta Reform Act of 2009 (“Delta Reform Act”).

Finally, the Board should also reject the Application as contrary to the public interest. The Proposed Project will cause unreasonable impacts to fish and wildlife populations and water quality—all of which are already severely degraded—and those unreasonable impacts result because the Applicant and the Proposed Project’s potential contractors have failed to adequately invest in local and regional water supply projects.

## **II. SCOPE OF THE PROCEEDING AND LEGAL STANDARDS**

Consistent with its obligations under state law, the Board is required to consider the Proposed Project’s full range of impacts to fish and wildlife and the public interest, not just the claimed benefits in the Application. The Board has “an independent obligation to consider the effect of the Proposed Project on public trust resources and to protect those resources where feasible,” *In the Matter of Permit 10477*, 2015 WL 4517569, at \*9, 22 (March 30, 2015), and must consider the public trust when conditioning or approving any diversion of water, *In the Matter of License 7979 (Application 20301) of Irv Leen*, SWRCB Feb. 3, 2013 (2013 WL 596457) (citations omitted); *see also* Water Rights Order 2009-0033.

The Proposed Project’s impacts must comply with existing water quality objectives, but the Board’s review of impacts cannot be limited to compliance with existing water quality objectives because, according to the Board and state and federal fish and wildlife agencies, the existing objectives in the Bay-Delta Water Quality Control Plan fail to protect public trust resources including fish and wildlife and beneficial uses. *See, e.g.*, SWRCB, Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (August 3, 2010) at 2 (“[t]he best available science suggests that current flows are insufficient to protect public trust resources.”); *id.* at 5 (acknowledging that “[r]ecent Delta flows are insufficient to support native Delta fishes for today’s habitats”); SWRCB Resolution 2010-0039 (“In accordance with the Delta Reform Act, the State Water Board approves the report determining new flow criteria for the Delta ecosystem that are necessary to protect public trust resources.”); SWRCB, Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows (“2017 Final Scientific Basis Report”) at pp. 1-3 to 1-5, 1-21 to 1-22, 3-1,

5-1 to 5-3, 5-5, 5-7 to 5-8, 5-15, 5-25, 5-32 to 5-34, 5-41 to 5-42, 5-47; *see also* SWRCB, July 2018 Framework for the Sacramento/Delta, Update to the Bay-Delta Plan.

Similarly, the Board must ensure more than mere compliance with the California Endangered Species Act to avoid unreasonable impacts on fish and wildlife. Instead, in evaluating reasonable protection of fish and wildlife, the Board must protect species, like fall-run Chinook Salmon, White Sturgeon, Starry Flounder, and others that are not currently listed under CESA, as well as ensuring stronger protections that meaningfully improve conditions for spring-run Chinook Salmon and other species that are CESA-listed. The Board must also find that granting the application will not conflict with or impair meeting the existing narrative objective for salmon protection (salmon doubling) in the Bay-Delta Water Quality Control Plan (“WQCP”), or the proposed “viability” objective being considered by the Board as part of its imminent update of the Sacramento River and Delta portions of the WQCP. Indeed, it is impossible for the Board to reasonably protect fish and wildlife beneficial uses if fish populations are not viable.

Finally, the Board must evaluate the availability of alternative water supplies including water recycling, water conservation and efficiency, and urban stormwater capture, in evaluating the reasonableness of protections for fish and wildlife and other beneficial uses. *See* Decision 1485 at pp. 16-19; Decision 1631 at pp. 165-168, 176-177; Water Rights Order 2009-0034EXEC; *see also* Water Code § 13241(f). And the Applicant must demonstrate compliance with Water Code section 85021 requiring agencies to reduce reliance on water supplies from the Bay-Delta and invest in regional self-sufficiency.

### **III. FACTUAL AND LEGAL BASIS FOR DENYING THE APPLICATION**

#### **A. The Proposed Project Would Cause Environmental Harm, Unreasonable Impacts to Fish and Wildlife, and Damage Public Trust Resources**

The best available scientific data and information demonstrate that granting the Application will cause unreasonable impacts to fish and wildlife, including: continued declines and potential extinction of the San Francisco Estuary population of Longfin Smelt, winter-run Chinook Salmon, and other fish species listed as endangered or threatened under the ESA and CESA; reduced survival of commercially important fall-run Chinook Salmon; reduced recruitment in and increased peril to the estuary’s White Sturgeon population (which currently supports a valuable recreational fishery), reduced productivity for Starry Flounder (which contribute to a valuable commercial fishery), and degraded water quality, estuarine habitat and fish migration for a broad range of native fish species in the Sacramento River and Bay-Delta. Damaging these public trust resources is an unreasonable environmental harm, and approval of

the Proposed Project in light of these impacts is contrary to law. These impacts are discussed in detail in NGO comments on the Revised Draft Environmental Impact Report / Supplemental Draft Environmental Impact Statement (“RDEIR/SDEIS”) for the Proposed Project,<sup>1</sup> as well as in comments and studies prepared by state and federal agencies, including the California Department of Fish and Wildlife (“CDFW”), the U.S. Environmental Protection Agency (“EPA”), and the Board.

*i. Longfin Smelt*

Granting the Petition is likely to reduce the abundance of Longfin Smelt, primarily because the project will significantly reduce winter and spring outflows below the already impaired status quo. See Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 27-32. There is overwhelming scientific evidence that one of the primary drivers of the abundance of Longfin Smelt is the volume of Delta outflow in the winter and spring months. CDFW found that “the Proposed Project, as currently described, and the mitigation measures currently proposed in the RDEIR/SDEIS are not sufficient to reduce impacts to less than significant for salmonids, Delta Smelt, and Longfin smelt,” warning that “further reduction in winter/spring outflow may exacerbate the current decline in longfin smelt population.” See Comments by California Department of Fish and Wildlife on Sites Reservoir RDEIR/SDEIS, dated January 28, 2022, attached as Exhibit B, at Appendix A pp. 1, 23. The Board likewise concluded that the Proposed Project may not be sufficient to reduce operational impacts to Longfin Smelt, recommending evaluation of significantly higher bypass flow requirements, including Delta outflow requirements. See Comments by the Board on Sites Reservoir RDEIR/SDEIS, dated January 28, 2022, attached as Exhibit C, at p. 6; see also *id.* at p. 32 (“As described in comments on Chapters 2 and 5, reductions in flows and survival of juvenile fish with a demonstrated flow survival relationship are likely to be negatively impacted by Proposed Project operations that reduce baseline flows.”).

The Board has repeatedly found that, based on the best available science, existing Delta outflows are inadequate to protect Longfin Smelt. See Exhibit C, Board Comments, at p. 15 (“A significant amount of scientific information indicates that existing river flows, Delta outflows, and interior Delta flows (baseline flows) are not sufficient for halting and reversing declines of

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<sup>1</sup> Comments by National Resources Defense Council, Defenders of Wildlife, Baykeeper, The Bay Institute, Golden State Salmon Association, Restore the Delta, Planning and Conservation League, Northern California Council of Fly Fishers International, California Sportfishing Protection Alliance, Friends of the River, Golden West Women Flyfishers, Pacific Coast Federation of Fishermen’s Associations, Institute for Fisheries Research, Save California Salmon, and Sierra Club California, on the Sites Reservoir RDEIR/SDEIS, dated January 28, 2022, are attached as Exhibit A.

multiple fish populations in the Bay-Delta watershed.”); *see also* 2017 Final Scientific Basis Report at pp. 3-53 through 3-60. The U.S. Fish and Wildlife Service (“USFWS”) has likewise concluded that Longfin Smelt warrants listing as endangered under the federal ESA, that the reduction in winter-spring Delta outflow is the primary threat to the continued existence of the species, and that existing regulatory protections, including existing Delta outflow requirements of the WQCP and requirements under the CESA incidental take permit for the State Water Project, are inadequate to protect Longfin Smelt. *See* U.S. Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Endangered Species Status for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt, 87 Fed. Reg. 60957, 60961-60964, 60968-60971 (Oct. 7, 2022). Thus, maintaining existing levels of winter and spring Delta outflows is likely to lead to continued declines in abundance of this species.

Despite this well-established science, initial modeling submitted by the Applicant to the Board demonstrates that operations of Sites Reservoir would significantly reduce Delta outflow from current conditions. Indeed, Applicant’s modeling shows that the Proposed Project would, in some cases, more than entirely eliminate any (theoretically available) increases in winter-spring outflow under the proposed voluntary agreement.<sup>2</sup>

In addition to unreasonable effects from reduced Delta outflow, granting the Petition is likely to harm Longfin Smelt by increasing entrainment in the Delta. *See* Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 27-29. And the RDEIR/SDEIS uses a flawed analysis of the environmental impacts to Longfin Smelt. *See id.*, at pp. 30-32; *see also* Exhibit B, CDFW Comments, at Appendix A p. 23.

Finally, the RDEIR/SDEIS erroneously assumes that tidal marsh habitat restoration would mitigate impacts to Longfin Smelt resulting from reduced Delta outflow under the Proposed Project. This assumption is not supported by the best available scientific information. *See* Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 32-34; *see also* NGO Comments on Voluntary Agreement Scientific Basis Report for Phase 2, dated February 8, 2023, attached as Exhibit D, at pp. 4-6, 9-11.<sup>3</sup> CDFW concluded that the proposed habitat mitigation measure “does not account for impacts associated with reduced Delta outflow due to Proposed Project diversions.” *See* Exhibit B, CDFW Comments, at Appendix A p. 24. Similarly, in its Species Status

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<sup>2</sup> Purported flow increases under the voluntary agreement are themselves largely replacing flows that were protected under the 2008/2009 ESA biological opinions, but which were made available for diversion by the illegal 2019 biological opinion, which forms the baseline for the voluntary agreements.

<sup>3</sup> Comments submitted by National Resources Defense Council, San Francisco Baykeeper, The Bay Institute, California Sportfishing Protection Alliance, Defenders of Wildlife, and Golden State Salmon Association.



Assessment of Longfin Smelt in the San Francisco Estuary, the USFWS indicated that the potential for restoration of shallow water habitat to benefit the species was uncertain, stating:

“The loss of tidal marsh habitats may have hampered species productivity, but to date, there are no indications that restoration has been sufficient to stem the decline. Therefore, we cannot conclude whether or not the species has lost resilience due to landscape changes that occurred in the 19th and 20th centuries. The quantitative contributions of restored estuarine marshes to larval growth and rearing remains a potentially important science question in support of longfin smelt conservation.

USFWS Species Status Assessment (2022) Chapter 3 at p. 56, emphasis added, attached as Exhibit E.

The impacts on Longfin Smelt are unreasonable, are not mitigated, and must be avoided and fully mitigated if the Proposed Project is to proceed. Further harm to endangered public trust resources is also unreasonable. The Application should be denied, or in the alternative conditioned as described below to avoid unreasonable harm to Longfin Smelt.

**ii. Winter-run Chinook Salmon**

Granting the Petition is likely to reduce the survival and abundance of winter-run Chinook Salmon, primarily because the proposed bypass flows are inadequate to protect the species. See Exhibit A at pp. 20-25.

The best available science demonstrates that the survival of juvenile winter-run Chinook Salmon migrating down the Sacramento River increases continuously as instream flow at Bend Bridge increases up to approximately 24,720 cubic feet per second (cfs) and beyond. Hassrick et al. 2022. And generally, more flow on the Sacramento River increases survival of migrating juvenile winter-run Chinook Salmon. See Henderson et al. 2018. Reducing Sacramento River flows via diversions to Sites Reservoir will reduce the survival of migrating juvenile winter-run Chinook Salmon juveniles. To avoid harm to this species, the Proposed Project proposes bypass flows of just 10,700 cfs at Wilkin’s Slough. The evidence shows that the proposed bypass flow is inadequate to protect migrating winter-run Chinook Salmon. As a result, the Proposed Project’s water diversions will significantly reduce the survival of juvenile winter-run Chinook Salmon migrating down the Sacramento River. This is unreasonable.

In addition to reducing survival in the Sacramento River, granting the petition will reduce survival of juvenile winter-run Chinook Salmon through the Delta. The best available science demonstrates that there is a strong flow-survival relationship in many reaches of the Delta, and that survival of juvenile salmon through the Delta “decreases sharply” whenever flows at Freeport are less than ~35,000 cfs. Perry et al. 2018 (“survival decreases sharply and routing into the interior Delta (where survival is low) increases sharply as Delta inflows decline

below approximately  $1,000 \text{ m}^3\text{s}^{-1}$  [ $\sim 35,000 \text{ cfs}$ ].”); *see also* Hance et al. 2021. However, the petition includes no proposed bypass flows for the Sacramento River at Freeport, and the requirement of just 10,700 cfs at Wilkin’s Slough will not guarantee sufficient flows at Freeport. The best available science indicates that proposed operations would reduce survival of winter-run salmon by reducing flows through the Delta. This is unreasonable.

Moreover, the RDEIR/SDEIS’ analysis of impacts to winter-run Chinook Salmon is flawed and fails to use the best available science, including the failure to use the best available science regarding the effects of flow on juvenile survival, the timing of migration, and temperature impacts on salmon eggs. *See* Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 9, 20-25.

Relatedly, the initial analysis of potential impacts from the Proposed Project using National Marine Fisheries Service’s Winter-Run Life Cycle Model (“WRLCM”) fails to use the best available science in two distinct and important ways, and as a result the model underestimates the adverse effects of the Proposed Project on survival and abundance.

First, the WRLCM fails to accurately assess the impacts of Sacramento River flows on the survival of winter-run Chinook Salmon. The WRLCM fails to incorporate data on the effects of river flows on survival of juvenile winter-run Chinook Salmon published in Hassrick et al. 2022; instead, the WRLCM uses a relatively flat flow-survival curve that is inconsistent with the best available science and that significantly underestimates the effects of reduced flows on reducing juvenile outmigration survival. WRLCM Model Description, March 15, 2023, at p. 13.

Second, the WRLCM assumes that operation of the Proposed Project will generate improved winter-run egg survival in a handful of years, through temperature benefits below Shasta Dam that arise from exchanges with the Bureau of Reclamation, *see* WRLCM Report 2035, Sites Alt3A\_Mod, Alt3B\_Mod, and NAA DRAFT, Feb. 27, 2023, at pp. 4-6. However, those purported water temperature benefits of exchanges are speculative, and do not account for the increased carryover storage requirements at Shasta Dam likely to be required as part of the ongoing ESA consultation regarding Central Valley Project operations. Indeed, new temperature requirements at Shasta Dam will likely eliminate the purported temperature benefits touted by the Applicant.<sup>4</sup>

As a result, the WRLCM’s assumed water temperature benefits are overstated or illusory, and the impacts of water diversions on river flow rates are understated. Thus, the reality of these impacts will be worse than described by the modelling—impacts which are unreasonable.

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<sup>4</sup> Modeled benefits that meet existing and/or planned regulatory requirements are not a “benefit” from the Proposed Project and cannot be relied upon to avoid unreasonable impacts. And modeled benefits that are not explicitly included as conditions in any approved water rights application are purely speculative and not reasonably certain to occur.

Finally, the best available science does not show that tidal marsh or other habitat restoration would mitigate and offset these impacts on winter-run Chinook Salmon. See Exhibit D, NGO Voluntary Agreement Scientific Basis Report Comments, at 1-4, 6, 7, 9-11. An ineffective mitigation plan that does not offset actual harms is unreasonable.

**iii. Spring-run Chinook salmon**

Granting the Petition is likely to reduce the survival and abundance of spring-run Chinook Salmon, primarily because the proposed bypass flows are inadequate to protect the species. See Exhibit A at pp. 23, 26. Spring-run Chinook Salmon currently face a high risk of extinction due to significant population declines and low abundance this year, warranting particular attention and strengthened protections for this imperiled species. See National Marine Fisheries Service Report, March 2022, at pp. 4-5; see also National Marine Fisheries Service Report, March 2023, at pp. 1-2.<sup>5</sup>

Reduced instream flow because of diversions to Sites Reservoir is likely to reduce the survival of juvenile spring-run Chinook Salmon migrating down the Sacramento River, because the proposed bypass flow criteria are inadequate. The analysis published in Michel et al. 2021 identifies a potential flow-survival threshold at 10,712 cfs, above which survival of sonic-tagged juvenile salmon was approximately 50.8 percent through the stretch of the Sacramento River those authors studied.<sup>6</sup> However, there are error bounds around this estimated flow-survival threshold, meaning the actual threshold may be 11,030 cfs or higher. Furthermore, there is substantial evidence that the relationship between flow and juvenile Chinook Salmon survival is continuous, with survival increasing as flow increases. For example, in contrast to the thresholds detected by Michel et al. 2021, numerous other studies have not found similar breakpoints, but instead have concluded that juvenile salmon survival increases as flows increase, even beyond 11,030 cfs. See, e.g., Michel et al. 2015; Henderson et al. 2018; Michel 2019; Munsch et al. 2020; Notch et al. 2020; Hance et al. 2021; Hassrick et al. 2022. Moreover,

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<sup>5</sup> These reports are available at <https://www.pcouncil.org/documents/2022/03/d-1-a-supplemental-nmfs-report-1.pdf/> (2022), and <https://www.pcouncil.org/documents/2023/02/d-1-b-nmfs-report-1.pdf/> (2023).

<sup>6</sup> The paper documents similar survival rates at flows between 10,712 cfs and 22,872 cfs, and a decrement in survival at flows above 22,872 cfs. However, the authors acknowledged that the apparent decline in survival at flows greater than the upper flow threshold, which was based on limited observations at higher flows, may be erroneous, admitting, “The 22,872 cfs threshold may be an artifact of lower detection efficiencies associated with fish utilizing additional high flow migration routes with less receiver coverage.” In other words, at flows higher than 22,872 cfs, Chinook Salmon may migrate through habitats where there is no detection of sonic tags, thus, the appearance that these fish died (reducing survival rates) during migration may be erroneous.

flow thresholds detected in sonic tag studies are not informative regarding flows necessary to protect migrating salmon fry, which are smaller than the fish used in the acoustic tag studies. See Exhibit A, NGO RDEIR/SDEIS Comments at pp. 22-24. Migratory behavior and response to increases in river flows differs across Chinook Salmon juvenile class sizes. The thresholds detected by Michel et al. 2021 apply only to the relatively large fish used in that study. By contrast, Munsch et al. 2020 found that density of wild-spawned Chinook Salmon fry found in Delta tidal marshes increased with increasing flow above ~53,000 cfs.

Given that Michel et al. 2021 concluded that the effect of flow on survival of the fish they studied was represented by thresholds, any flow below the true threshold would produce no survival benefit. Thus, to ensure that fish benefit from flow bypasses at the diversion for Sites Reservoir, the bypass flow criteria must include a safety factor that accounts for environmental variability and measurement error in the estimated threshold.

In addition to reducing survival in the Sacramento River, granting the petition is likely to reduce survival of juvenile spring-run Chinook Salmon through the Delta. The best available science demonstrates that there is a strong flow-survival relationship in many reaches of the Delta, and that survival of juvenile salmon through the Delta “decreases sharply” whenever flows at Freeport are less than ~35,000 cfs. Perry et al. 2018 (“survival decreases sharply and routing into the interior Delta (where survival is low) increases sharply as Delta inflows decline below approximately  $1,000 \text{ m}^3\text{s}^{-1}$ .”); see also Hance et al. 2021. However, the petition includes no proposed bypass flows for the Sacramento River at Freeport. The best available science indicates that proposed operations would reduce survival of juvenile spring-run salmon through the Delta.

As with winter-run Chinook Salmon, there is no basis for concluding that the Proposed Project would result in significant improvements in water temperature or spawning conditions for spring-run Chinook Salmon.

Finally, the best available science does not show that tidal marsh or other habitat restoration would mitigate and offset these impacts on spring-run Chinook salmon. See Exhibit D. These impacts to spring-run Chinook Salmon are unreasonable.

#### ***iv. Fall-run Chinook Salmon***

Granting the Petition is likely to reduce the survival and abundance of fall-run Chinook Salmon, primarily because the proposed bypass flows are inadequate to protect the species. Exhibit A at pp. 26-27. The closure of the salmon fishery in 2023, and potential closure in 2024, which is due to low abundance of fall-run Chinook Salmon, highlight the need to strengthen protections for fall-run Chinook Salmon in the freshwater environment, to protect the species and the thousands of jobs in the salmon fishery that depend on healthy salmon runs.

Reduced instream flow because of diversions by Sites Reservoir are likely to reduce the survival of juvenile fall-run Chinook Salmon migrating down the Sacramento River and through the Delta, because the proposed bypass flow criteria are inadequate. *See* § III.A.iii, *supra* (necessary bypass flows and impacts to spring-run Chinook Salmon).

As with winter-run Chinook Salmon and spring-run Chinook Salmon, there is no basis for concluding that the Proposed Project would result in significant improvements in water temperature or spawning conditions for fall-run Chinook Salmon.

Finally, the best available science does not show that tidal marsh or other habitat restoration would mitigate and offset these impacts on fall-run Chinook salmon. *See* Exhibit D, NGO Voluntary Agreement Scientific Basis Report Comments at pp. 1-4, 6-7, 9-11. Ineffective mitigation in the face of understated and actual harm is unreasonable, especially given the perilous status of the species and the closure of the fishing season due to poor production of juveniles stemming from inadequate existing protections in the Sacramento River and Delta.

**v. Delta Smelt**

Granting the Petition is likely to reduce the survival and abundance of Delta Smelt. *See* Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 34-36. This is unreasonable. In particular, the RDEIR/SDEIS completely ignores the effects of reduced spring Delta outflow on the abundance of Delta Smelt, despite scientific research demonstrating that reduced Delta outflow in the spring reduces the recruitment and subsequent abundance of Delta Smelt. *See id.*, pp. 34-35; *see also* Smith et al. 2021; Polansky et al. 2021; Final 2017 Scientific Basis Report at pp. 3-73 to 3-74; IEP MAST 2015. In addition, the project would likely reduce the survival and abundance of Delta Smelt by reducing turbidity in the Delta, as the RDEIR/SDEIS demonstrates the project would reduce sediment loading to the Delta. *See* Exhibit A, NGO RDEIR/SDEIS Comments, at pp. 34-35.

Finally, there is no scientific evidence that tidal marsh or other habitat restoration can fully mitigate these adverse impacts. *See* Exhibit D, NGO Voluntary Agreement Scientific Basis Report Comments, at pp. 6-7, 9-11. These Proposed Project's impacts due to reduced flows on a nearly extinct endangered species are unreasonable and are likely to result in permanent harm.

**vi. Green Sturgeon and White Sturgeon**

Reduced Sacramento River flow in spring months caused by water diversions to Sites Reservoir will unreasonably harm Green Sturgeon and White Sturgeon. Green Sturgeon in San Francisco Bay's watershed are listed as threatened under the ESA ("southern DPS Green Sturgeon").

White Sturgeon are listed as of Special Management Concern by CDFW (CDFW 2015) and experienced a major mortality event in 2022 as a result of a harmful algal bloom (red tide) in San Francisco Bay caused by the algae *Heterosigma akashiwo*, see CDFW, May 16, 2023, available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213229&inline>, and additional mortality for the same reason in 2023. The best available science demonstrates that high river flows and Delta outflow in the spring months are necessary for the reproductive success and long-term abundance of White Sturgeon. See, e.g., Israel 2009; CDFW 2015; Jackson 2016.<sup>7</sup> Indeed, CDFW’s conceptual model for San Francisco Estuary White Sturgeon life history states:

The dispersal of larval white sturgeon is dependent on high spring river flows, which optimally consists of multiple large flow pulses and a relationship between the mean monthly outflow from April–July and white sturgeon YOY has been developed (Kohlhorst et al. 1991). Reduced seasonal flows or flows mismatched ecologically with sensitive early life stages may reduce dispersal of these life stages when they are most vulnerable to native and nonnative predation. Flow reductions may serve to reduce or eliminate YOY survival even if spawning was successful.

Israel et al. 2009 at p. 17.

Analysis of young-of-year White Sturgeon catch data from the Interagency Ecological Program’s (IEP) Bay Study between 1980-2022 reveals that recruitment of White Sturgeon juveniles does not occur when Sacramento River flows (as measured by the sum of the “SAC” and “YOLO” variables in DWR’s DAYFLOW dataset) are less than ~55,000 cfs during April, May, and June<sup>8</sup> and that recruitment is strongly and positively correlated with flows greater than 55,000 cfs. When Sacramento River flows into the Delta exceed ~80,000 cfs, young-of-year White Sturgeon are almost always detected in subsequent sampling. The project would reduce flows below these levels, causing unreasonable impacts to these species, especially given their imperiled status under state and federal law.

### **vii. *Starry Flounder***

Reduced Sacramento River flow in spring months caused by water diversions to Sites Reservoir will unreasonably harm Starry Flounder and the commercial fishery to which this fish

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<sup>7</sup> The Water Board and other agencies assume that flows needed to support recruitment of Green Sturgeon are roughly the same as those needed to support recruitment of White Sturgeon. See, e.g., 2017 Scientific Basis Report at 3-63 to 3-66. (“The assumption is that this species needs flows of a similar magnitude as white sturgeon (USFWS 1996)” at 3-63.)

<sup>8</sup> According to the Sites application, diversion of flows will end after June 15 of each year; thus, we do not present analysis of the relationship between July flows and White Sturgeon recruitment.

contributes. Starry Flounder is a native marine fish that spawns outside the Golden Gate bridge. Larval and juvenile Starry Flounder rear in San Francisco Bay. Rearing success (measured as age 1 fish detected in the IEP Bay Study otter trawl) is strongly and positively correlated with Delta outflow, *see, e.g.*, Jassby et al. 1995; Kimmerer 2002; Ralston 2005; SWRCB 2017) and abundance of Starry Flounder rearing in San Francisco Bay is correlated with subsequent catch in the ocean fishery. Reductions in Delta outflow resulting from diversion to Sites Reservoir will reduce productivity and abundance of Starry Flounder. Given the already reduced abundance of this species, further degradation of the conditions it needs for successful recruitment and rearing is unreasonable.

**viii. Avian and Fully Protected Species**

Granting the Petition will harm numerous threatened, endangered, and other special status bird species by the construction and operation of Sites Reservoir.<sup>9</sup> Avian species that will be impacted include, but are not limited to, Western Yellow-billed Cuckoo, Bald Eagle, Swainson’s Hawk, Bank Swallow, Burrowing Owl, Golden Eagle, and White-tailed Kite, each of which exists in the project area and reaches of the Sacramento River and Delta. *See* RDEIR/SDEIS, Chapter 10.

According to the Applicant, the construction and ongoing operation of the project will facilitate direct take of Burrowing Owls, Golden Eagles, Bald Eagles, and White-tailed Kite through electrocution or collision with new transmission lines. *See, e.g.*, RDEIR/SDEIS at pp. 10-87, 10-95 to 10-97. Take of avian species could also occur through use of rodenticides, disturbances of nesting sites, and other means, and the RDEIR/SDEIS does not make clear how or whether these impacts would be fully avoided.<sup>10</sup> *See, e.g.*, Exhibit B, CDFW Comments, at Appendix A p. 14.

Finally, the construction and ongoing operation of the project will also result in loss of habitat for many species such as Swainson’s Hawk and Bank Swallow, due to inundation and changes in current flow regime. *See* Exhibit B, CDFW Comments, at Appendix A p. 13.<sup>11</sup> More

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<sup>9</sup> The full extent of significant impacts to avian and terrestrial species are unknown because project proponents did not use specific bird surveys, an accurate species distribution survey, and did not complete an aquatic delineation. The harms that are revealed by project proponents are likely an understatement of the real impacts. *See* Exhibit A, NGO RDEIR/SDEIS Comments at pp. 37-42; *see also* EPA Comments on RDEIR/SDEIS, January 28, 2002, attached as Exhibit F.

<sup>10</sup> Sites project will permanently impact 14,000 acres of suitable nesting habitat for the owl. Additionally, CDFW has noted that rodenticides used for pest control could negatively impact the Burrowing Owl, especially as the project lacks an Integrated Pest Management Plan.

<sup>11</sup> CDFW specifically states that, “Timing of flow releases can have both direct and indirect impacts to bank swallow populations. Direct impacts and potential take can occur if high flows

specifically, CDFW emphasizes that the changes in high flows during the late spring and summer will negatively impact nesting season for the threatened Bank Swallow. *See id.*, at Appendix A p.14. The loss of nesting habitat from changes to flow regime on the Sacramento River will be compounded by the loss of 15,664 acres of foraging habitat due to the Proposed Project. *See* RDEIR/SDEIS at p. 10-85.<sup>12</sup>

#### **ix. Wetlands**

According to the Applicant, Sites Reservoir would inundate and destroy terrestrial and aquatic habitat covering approximately 13,200 acres in Antelope Valley, devastating the habitat of numerous terrestrial and semi-terrestrial species.<sup>13</sup> RDEIR/SDEIS at ES-11. More specifically, “construction of the reservoir and appurtenant facilities under Alternatives 1 or 3 would result in permanent impacts to approximately 425 acres of wetlands and 234 acres of streams, with impacts under Alternative 2 slightly lower due to a smaller reservoir footprint.” Exhibit F, EPA Comments, at p. 5; *see also* RDEIR/SDEIS at pp. 9-19, 9-29.

The EPA comments also emphasize that these impacts require analyses and findings, such as the determination of a least environmentally damaging practicable alternative, that cannot currently be supported without additional site-specific information which is not provided in the RDEIR/SDEIS, and that information was not provided in the Sites application. *See* Exhibit F, EPA Comments at p.5. To show the variability in the specific number, in contrast, the Board estimated different acreage amounts in their RDEIR/SDEIS comments, “Alternatives 1-3 are described as potentially eliminating more than 375 acres of wetland resources and more than 200 miles of stream resources.” Exhibit D, Board Comments, at p. 32.

Operation of the Proposed Project will also impact wetlands downstream of the project along the Sacramento River and in the Sutter and Yolo bypasses by reducing the area of

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during the late spring and summer nesting season cause inundation of burrows or loss of nests caused by localized bank sloughing. Indirect impacts could occur with changes in flow regimes as bank swallows need winter and early spring flows to allow refreshing of erosional banks. Therefore, a change from current operations of flows on the Sacramento River as a result of the Proposed Project could beneficially or adversely impact bank swallows depending on the timing, duration, and volume of flows. CDFW recommends the FEIR/FEIS include the consideration of bank swallow life cycle in any changes in flows as a result of the Proposed Project, especially during nesting season (April - August).” *See* CDFW Comments, Exhibit B, at Appendix A p. 14.

<sup>12</sup> *See* Table 10-2d Acreages of Permanent and Temporary Impacts on Modeled Special-Status Bird Habitats in the Study Area.

<sup>13</sup> This number is just an estimate and may be more because, as we stated in the RDEIR/SDEIS comments, the RDEIR/SDEIS fails to accurately describe the baseline condition of the project site and the presence of special status species, undermining the accuracy of the impact analyses.



inundation at both bypasses and in Sacramento side channel habitat. See Exhibit F, EPA Comments, at pp. 5-6; see also RDEIR/SDEIS Appendix 11M, Chapter 9. Less than 10 percent of California’s native wetlands remain after they were drained and diked for agricultural uses. See “The Central Valley Historic Mapping Project” by California State University, Chico Department of Geography and Planning and Geographic Information Center, 2003.<sup>14</sup> California’s wetlands offer both and support millions of migrating birds each year, in addition to many other environmental and flood management benefits. See State of California Natural Resources Agency (2010) State of the State’s Wetlands: 10 Years of challenges and Progress, Sacramento, CA.<sup>15</sup>

The Project construction’s transmission lines will also specifically impact vernal pools, which are of critical importance to many species, including amphibians, for breeding habitat.<sup>16</sup> For electrical transmission lines, the RDEIR/SDEIS indicates that “[o]nly one of the two north-south transmission line alignments described in Chapter 2 would be constructed, and specific locations for the transmission line towers are currently unknown.” RDEIR/SDEIS at 9-14. Transmission line can have serious impacts to birds and the towers can destroy vernal pool wetlands and other important landscape features.<sup>17</sup>

#### **x. Terrestrial Species**

There are 33 special-status wildlife species likely to occur in the study area for the project. See RDEIR/SDEIS at 10-16. These species will be harmed by loss in habitat and the Proposed Project’s ongoing operations. For example, the threatened Giant Garter Snake will be negatively impacted from the Project’s construction activities. Construction activities are planned during the Giant Garter Snake’s active period of May 1 and October 1, jeopardizing

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<sup>14</sup> Available at [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/docs/cmnt081712/sldmwa/csuchicodptofgeographyandplanningcentralvalley.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/cmnt081712/sldmwa/csuchicodptofgeographyandplanningcentralvalley.pdf)

<sup>15</sup> Available at [https://resources.ca.gov/CNRALegacyFiles/docs/SOSW\\_report\\_with\\_cover\\_memo\\_10182010.pdf](https://resources.ca.gov/CNRALegacyFiles/docs/SOSW_report_with_cover_memo_10182010.pdf). California cannot afford to further reduce its wetland footprint.

<sup>16</sup> See EPA Fact Sheet [https://www.epa.gov/sites/default/files/2021-01/documents/amphibian\\_reptile\\_conservation.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/amphibian_reptile_conservation.pdf). The latest aquatic delineation of the region’s wetlands has not been updated in over 20 years. California Department of Water Resources. 2000. North of Delta Offstream Storage Investigation Progress Report, Appendix B: Wetland Delineation and Field Studies Report. Draft. Prepared for Integrated Storage Investigations, CALFED Bay-Delta Program. April 2000.

<sup>17</sup> Environmental Protection Agency, Environmental Impacts of Electricity Delivery, “When power lines and their access roads are placed in undeveloped areas, they can disturb forests, wetlands, and other natural areas.” Available: <https://www.epa.gov/energy/electricity-delivery-and-its-environmental-impacts#impacts>; last updated October 24, 2022.

breeding and existing populations that are present in the project area. See RDEIR/SDEIS at 10-80; see also USFWS Final Recovery Plan for the Giant Garter Snake, 2017 at I-3. Project operations will also decrease important riparian habitat along the Sacramento River for the threatened Western Yellow-billed Cuckoo. The diversions of the Proposed Project will compound the negative impacts from existing dams and diversions, such as reduction of mean annual peak discharge flow, sediment starvation and reduced bank erosion rates and deposition. See CALFED 2000b; Greco 2014; Michalková et al. 2010; Buer et al. 1989; see also Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and State Water Project, USFWS 2019, pp. 363-392.

In addition to the habitat lost to inundation, the construction of roads and new water transfer infrastructure will also sever ecosystems and inhibit species movement and proliferation. See RDEIR/SDEIS at pp. 10-137, 10-139; see also CDFW Comments, Exhibit B, at Appendix A p. 26. CDFW has identified much of the project area as having high connectivity value and high biodiversity ranking, with some areas marked as “irreplaceable and essential corridors” and “conservation planning linkages” in their Areas of Conservation Emphasis program. See CDFW, “Areas of Conservation Emphasis” Mapping Tool, available at <https://wildlife.ca.gov/Data/Analysis/ACE>. Connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as the climate changes. See Cushman et al., 2013; Heller & Zavaleta, 2009; Krosby et al., 2018.

**xi. Additional Fish, Wildlife, and Human Health Impacts via Effects on Water Quality**

The proposed diversions to, and water releases from, Sites Reservoir would significantly degrade water quality downstream of the diversion and release locations causing negative impacts to fish and wildlife beneficial uses and potentially harming public health. Granting the application is likely to contribute to increased frequency of harmful algal blooms in the Bay-Delta as a result of reductions in turbidity and flow into the Delta, and via the direct discharge of *Microcystis spp.*, other harmful algae, and/or warm water from the reservoir to the Sacramento River.

Harmful algal blooms of numerous algal and cyanobacteria species, including those in the genus *Microcystis*, currently occur in the Delta. See Kudela et al. 2023. These blooms can be lethal to fish, zooplankton on which fish feed, and small mammals, and can cause severe human health impacts. Toxins emitted by these blooms can be transported in water beyond the area of the bloom itself and toxins can also be aerosolized, creating potential health impacts to terrestrial and avian species. See Plaas and Paerl 2021. Blooms form in water with adequate nutrients (particularly nitrogen and phosphorous compounds) that is warm, relatively clear (low

turbidity), and slow moving (high residence time). Diversions of water from the Sacramento River into Sites Reservoir will reduce flow volume, velocity, and sediment loads in the river and parts of the Delta, making them more suitable for blooms or harmful algae. Indeed, evidence indicates that flow volume is a major factor controlling bloom frequency and magnitude in the Delta. *See* Lehman et al. 2008; Lehman et al. 2020; Berg and Sutula 2015. In addition, because water released from Sites Reservoir is likely to be warmer than receiving waters in the Sacramento River, the likelihood of harmful algae blooms forming in the Sacramento River or its tributaries in the Delta will also increase. Finally, it is likely that harmful algae will bloom in Sites Reservoir itself. In that case, releases from the reservoir may deliver algal cells to the Sacramento River, promoting formation of a harmful bloom. *See* Exhibit F, EPA Comments, at Detailed Comments p. 6 (“EPA concurs . . . that construction and operation of Sites Reservoir is likely to create conditions conducive to the formation of HABs”). Harmful algal blooms pose risks to fish, wildlife, and public health, and increasing their likelihood, magnitude, or scope is unreasonable.

In addition, the U.S. Environmental Protection Agency has raised significant concerns regarding water quality impacts, including:

- Exceeding water quality objectives for aquatic life protection in Sites Reservoir for aluminum, copper, and iron, which also cause concerns regarding water quality impacts to the Sacramento River;
- Exceeding health objectives for methylmercury in fish caught in Sites Reservoir;
- Increased frequency and magnitude of harmful algal blooms, both in the reservoir and in the Bay-Delta.

*See* Exhibit F, EPA Comments, at p. 2, and at Detailed Comments at pp. 5-7.

Further, reduced turbidity in the Delta due to reduced sediment loading, *see supra re Delta Smelt*, would also cause secondary adverse impacts, including increased frequency and magnitude of harmful algal blooms (see above) and predation of and decreased cover for native fish species.

In addition, releases of warm water from Sites Reservoir are likely to cause temperature impacts in the Sacramento River, including direct and indirect impacts to migrating adult salmon.

Each of these impacts to water quality harm the environment, harm public trust resources, and risk harms to human health. All of this is unreasonable.

**B. The Board Should Deny the Application as Proposed Because it is Contrary to Law**

In addition to causing unreasonable impacts to fish and wildlife, the Board should deny the Application because it is contrary to law. The environmental analysis in the RDEIR/SDEIS fails to comply with CEQA, including because it fails to consider a reasonable range of alternatives and fails to accurately assess likely environmental impacts. *See generally*, Exhibit A.

The Proposed Project violates CESA and the ESA because it fails to fully mitigate impacts to species listed or identified as at risk under these statutes and because it would jeopardize the continued existence of Longfin Smelt, winter-run Chinook Salmon, Delta Smelt, spring-run Chinook Salmon, and Green Sturgeon.

The Proposed Project also violates the requirements of Proposition 1 of 2014 because it fails to result in a net ecosystem improvement to the Bay-Delta, does not provide the ecosystem and public benefits that were approved by the Water Commission in 2018,<sup>18</sup> and the public benefits are not reasonably certain to occur because the Proposed Project lacks contracts or other enforceable mechanisms to ensure that Level 4 refuge water supply is actually delivered to the wildlife refuges. *See* footnote 4, *supra*.

Finally, the Proposed Project violates section 85021 of the Delta Reform Act because it will not reduce reliance on the Delta.

Each of these separate violations of law is sufficient to deny the Application, and approving the Proposed Project would be contrary to state and federal law.

**C. The Board Should Deny the Application as Proposed Because it is Not in the Public Interest**

The Board should also deny the Application because it is not in the public interest. The project would cause unreasonable impacts to fish and wildlife and to water quality in the Sacramento River and Bay-Delta estuary, significant harm to the environment, damage public trust resources, and is unlawful.

In addition, the Board should find that the Proposed Project is not in the public interest because of the availability of millions of acre feet of sustainable water supplies from water recycling, urban stormwater capture, and improved agricultural and urban water use efficiency.

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<sup>18</sup> For instance, the information provided to the Commission demonstrates that the project would provide far less water for wildlife refuges (Level 4) than what was approved by the Commission in 2018. *See* [https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2021/12 December/December2021 Item 10 SitesFeasibility Final.pdf](https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2021/12%20December/December2021%20Item%2010%20SitesFeasibility%20Final.pdf)

See Pacific Institute / NRDC Report entitled *The Untapped Potential of California's Water Supply*, 2014; see also Pacific Institute Updated Report, 2022.<sup>19</sup> The availability of these cost-effective, drought resilient water supplies demonstrates that reduced diversions from the Bay-Delta, and increased protections for fish and wildlife, are feasible, reasonable, and in the public interest. Demanding that Applicant and the Proposed Project's contractors implement sustainable water supplies rather than siphon *more* water from the Sacramento River and Delta to be transported south would benefit the public, water quality, and fish and wildlife. The opposite—diverting, storing, and shipping more water out of the Delta's watershed—is not.

Similarly, the Delta Reform Act (Wat. Code, § 85000 et seq.) focuses on the critical value of the Delta as a natural resource to California and the nation and the importance of preserving the Delta's vital features. Wat. Code, § 85002. "The Delta is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced estuary and wetland ecosystem of hemispheric importance." Wat. Code § 85022. Further, the legislature stated that the protection of the Delta is of "paramount concern." *Id.* The Delta Reform Act states that "[t]he policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs." Wat. Code, § 85021. Damaging the Delta by taking away the water that would otherwise support it is contrary to the public interest and unlawful.

Finally, dams and reservoirs have significant climate change impacts that are not addressed in the Proposed Project's water rights application. See, e.g., RDEIR/SDEIS Chapter 21 (Greenhouse Gasses). Adding greenhouse gas emissions from both construction and operation of the Proposed Project is not in the public interest. The Applicant's contention that the Project will be "net-zero" is a speculative promise, which at minimum requires enforcement of the mitigation measures described in the RDEIR/SDEIS. The Application, if approved, must condition the water rights on full compliance with mitigation measures described in the CEQA process. Without such guaranteed full compliance, climate impacts are an admitted problem (increased greenhouse gas emissions) without an enforceable solution.<sup>20</sup> This is not in the public interest.

Ultimately, whether Sites Reservoir is in the public interest cannot be determined based on solely rosy predictions of the Applicant's speculation about water supply resilience. It must, instead, be based on the science, the actual impacts of the Project on the Sacramento River and the Delta, public trust resources, fish and wildlife, public health, and the communities of

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<sup>19</sup> These reports are available at <https://www.nrdc.org/resources/untapped-potential-californias-water-supply> and at <https://pacinst.org/publication/california-urban-water-supply-potential-2022/> (2022).

<sup>20</sup> As above, modeled benefits (or planned mitigation measures) that are not explicitly included as conditions in any approved water rights application are not reasonably certain to occur.

Northern California that will be harmed by approval of the Application. See Sites Reservoir Authority, Status Briefing on Final EIR/EIS Part 3, May 19, 2023 (detailing “significant and unavoidable impacts to . . . surface water quality, vegetation and wetlands, wildlife” among others, and proposing adoption of Statement of Overriding Considerations under CEQA). Based on the best scientific data and information, the Proposed Project is not in the public interest and the Application should be denied.

#### **IV. CONDITIONS TO RESOLVE PROTEST**

The Proposed Project causes unreasonable impacts to fish and wildlife, is not in the public interest, damages public trust resources, and is otherwise in violation of the law. As a result, the Application should be denied in its entirety.

In the alternative, if the Board elects to grant the Application despite its illegality and unreasonable harms, it should condition the water rights approved for the Proposed Project as follows to mitigate the unreasonable harms described herein and ensure the Project does not degrade water quality.

##### **A. General Conditions**

1. A prohibition on diversion, summed across points of diversion, of volumes greater than or equal to 5% of Sacramento River flow on any day, as measured at the point of diversion where river flow is lowest.

2. A permit condition requiring that wherever existing quality of surface or ground waters are better than objectives established for those waters in a basin plan or water quality control plan, the existing quality be maintained and not be degraded or diminished due to operation of the Proposed Project. See State Water Board Resolution 68-16.

3. A prohibition on the release of water from Sites Reservoir to the Sacramento River that is warmer than the receiving water.

4. A prohibition on the diversion of water to Sites Reservoir at any time harmful algal blooms are documented in the Sacramento River or its distributaries in the Delta.

5. A prohibition on diversions from the Sacramento River to Sites Reservoir when any Temporary Urgency Change Order for Delta water quality is in effect.

6. A prohibition on delivery of water south of Delta from Sites Reservoir when any Temporary Urgency Change Order for Delta water quality is in effect.

7. A prohibition on the diversion of water into Sites Reservoir on any day that water is being released from Sites Reservoir for: (a) delivery south of Delta, or (b) to maintain environmental conditions in the Delta or San Francisco Bay.

8. Conditions in the Water Rights Permits requiring compliance with all provisions of the Bay-Delta Water Quality Control Plan and the Central Valley Basin Plan and that all operations of the Proposed Project shall, whenever possible, contribute to meeting all standards in both plans.

9. A prohibition on diversion or re-diversion of Trinity River water (water diverted by the Bureau of Reclamation from the Trinity River watershed into the Sacramento River watershed pursuant to its water rights) into the Sites Reservoir.

**B. Conditions specific to Upper Sacramento River bypass flows**

10. A prohibition on diversions of water into Sites Reservoir between October 1 and March 15 unless flows are greater than 24,720 cfs at all Sacramento River points of diversion.

11. A prohibition on diversion of water into Sites Reservoir from March 1 to June 30 unless flows greater than 11,030 cfs at all Sacramento River points of diversion.

**C. Conditions specific to Lower Sacramento River bypass flows**

12. A prohibition on diversions of water into Sites Reservoir between September 1 and June 30 unless flows at Freeport are greater than 35,000 cfs.

13. A prohibition on the diversion of water into Sites Reservoir between April 1 and June 30 when the 7-day average of Sacramento River discharge to the Delta ("SAC" in Dayflow) is between 55,000 cfs and 80,000 cfs.

**D. Conditions specific to Delta outflow**

14. A prohibition on the diversion of water from into Sites Reservoir between December 1 and June 30 unless Delta outflow is greater than 65 percent of unimpaired flow.

15. A prohibition on the diversion of water into Sites Reservoir between January 1 and March 31 and from June 1 to June 30 unless Delta outflow is greater than 42,800 cfs, and between April 1 and May 31 unless Delta Outflow is greater than 44,500 cfs.

16. In any water year concluding (in September) and following (in October) an "Above Normal" or "Wet" water year in the Sacramento Valley, a prohibition on the diversion of water from into Sites Reservoir between September 1 and October 31 unless Delta outflow is greater than 7,400 cfs.

**E. Conditions regarding releases of stored water to the Sacramento River**

17. A prohibition on releasing water from Sites Reservoir to the Sacramento River if cell counts of harmful algal bloom-forming organisms are higher in Sites Reservoir than they are at the point of release into the Sacramento River.

- a. Project proponents will work with the Board and CDFW to develop a harmful algal bloom monitoring program in Sites Reservoir and in the Sacramento River to ensure compliance with this term;
- b. All monitoring performed under this program shall be approved by the Board and CDFW;
- c. Applicant and/or Contractors of Sites Reservoir, except the Bureau of Reclamation or DWR, will fund this program *in perpetuity* from onset of operations; and,
- d. The monitoring program shall include at least 1 -year of pre-project baseline monitoring in the Sacramento River.

**F. Specific Conditions to Protect Wetlands and Terrestrial Species**

18. Project proponents must provide accurate species distribution, focused bird surveys, and aquatic wetland delineations, and work with the Board and CDFW staff to complete such essential work before construction begins.

19. Project proponents must develop detailed plans showing how all temporary and permanent impacts of the project on Golden Eagles, Giant Garter Snakes, vernal pools, and other species and habitats will be fully mitigated under the law, including appropriate assurances and performance standards before beginning operation of the Proposed Project.

**V. CONCLUSION**

For the foregoing reasons, as well as those provided during testimony and argument at the hearing on the Application, the Application should be denied. If the Application is not denied, the rights granted by the Board should be conditioned as described herein.



## **INDEX OF EXHIBITS**

Exhibit A – NGO Comments on RDEIR/SDEIS, dated January 28, 2022.

Exhibit B –California Department of Fish and Wildlife Comments on RDEIR/SDEIS, dated January 28, 2022.

Exhibit C –State Water Resources Control Board Comments on RDEIR/SDEIS, dated January 28, 2022.

Exhibit D – NGO Comments on Voluntary Agreement Scientific Basis Report, for Phase 2, dated February 8, 2023.

Exhibit E – U.S. Fish and Wildlife Service, Species Status Assessment for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt, 2022, Chapter 3.

Exhibit F –Environmental Protection Agency Comments on RDEIR/SDEIS, dated January 28, 2022.

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