Dear Mr. Wulff:

Thank you for the opportunity to comment on the Public Draft of the Bay Delta Conservation Plan (Draft Plan) and its associated draft Environmental Impact Report/Environmental Impact Statement (DEIR/S) and Draft Implementing Agreement (Draft IA). Friends of the San Francisco Estuary appreciates the enormity of this undertaking by the federal and state regulatory agencies, the California Department of Water Resources (DWR), the United States Bureau of Reclamation (USBR), and the California Natural Resources Agency. This letter transmits our comments on the Draft Plan, DEIR/S and the Draft IA.

Friends of the San Francisco Estuary (Friends) supports the original purpose of the Bay Delta Conservation Plan as a comprehensive conservation strategy aimed at protecting dozens of species of fish and wildlife while permitting the reliable operation of California's two biggest water delivery projects. The current drafts of the BDCP and DEIR/S, however, are fundamentally flawed in both their assumptions of benefits to the Bay-Delta Estuary and their failure to address impacts to the estuarine system. We ask the state and federal partners to withdraw and revise these documents to address the following deficiencies:

1. The Draft Plan does not improve Delta outflows over current degraded conditions. This inadequacy must be addressed in the Draft Plan and the DEIR/S.
2. The Draft Plan fails to fulfill the requirements of an NCCP/HCP to achieve conservation in the Plan Area, and instead may contribute to significant declines and potential extinction of several salmon runs and other native fisheries. The DEIR/S should be revised to reduce significant impacts to listed fish species, and include effective, proven measures to mitigate or reduce the significance of these impacts.
3. Impacts to areas downstream of the Plan Area, e.g., San Francisco Bay, are potentially significant and must be analyzed in the DEIR/S; mitigation measures should be identified as well.
4. Certain water quality impacts within the entire Bay-Delta Estuary have been determined to be significant and unavoidable, yet no mitigation is proposed for these impacts. The DEIR/S should include changes to operational proposals and other feasible mitigation measures to reduce or avoid these significant water quality impacts.
5. The Draft Plan fails to ensure funding for the conservation plan, as required by the Endangered Species Act and Natural Communities Conservation Planning Act, and it does not make an equitable commitment to the co-equal goals required under Delta Reform Act. These commitments must include financing, representative governance, and assurances for the completion of the non-facility conservation measures (CM2-CM22). The DEIR/S should be revised to ensure compliance with the Delta Reform Act through definite and specific commitments to protect, restore, and enhance the Delta ecosystem.
6. The BDCP does not reduce reliance on the Delta, as mandated by state law. The Draft Plan and DEIR/S should be revised to develop and analyze a proposed project and one or more alternatives that comply with this mandate.

1. The Draft Plan does not improve Delta outflows over current degraded conditions. This inadequacy must be addressed in the Draft Plan and the DEIR/S.

A broad range of federal and state agencies, including the United States Environmental Protection Agency (EPA), National Academy of Sciences’ Natural Resource Council Committee on Sustainable Water Management in California’s Bay-Delta, U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), State Water Resources Control Board (SWRCB), and California Department of Fish and Wildlife (CDFW) have stated that current Delta outflows are not adequate to maintain, recover or restore ecosystem processes and declining fish species in the San Francisco Bay-Delta Estuary. As recently stated by the EPA:

“There is broad scientific agreement that existing Delta outflow conditions are insufficient for protecting the aquatic ecosystem and multiple fish species, and that both increased freshwater flows and aquatic habitat restoration are needed to restore ecosystem processes in the Bay Delta and protect threatened & endangered fish populations.”

Yet the BDCP does not propose to increase Delta outflows, and in fact decreases total outflows under certain operating scenarios. Nor does the DEIR/S adequately address this significant adverse impact. The entire premise of the BDCP and DEIR/S is based on the assumption that extensive habitat restoration will successfully replace the need for increased freshwater flows to improve listed species. As noted in the DEIR/S, the benefit of this assumption to listed species is highly uncertain. The DEIR/S should provide an alternative with higher certainty of the benefit to listed species.

In addition, because Fall X2 requirements from the 2008 USFWS Biological Opinion were excluded from the existing baseline conditions (EBC1 and EBC2), the comparison of EBC1 and EBC2 to the High-Outflow Operating Scenario or HOS (preferred project Alternative 4, scenarios H3 and H4) is skewed. The DEIR/S must incorporate Fall X2 requirements, upheld in March of this year, into existing baseline conditions and re-analyze these in comparison to the proposed operating scenarios. One of the primary claims of the BDCP is that spring and fall outflow would be higher under HOS than under current conditions; this may not be the case if the existing baseline conditions are adjusted to include Fall X2. The Low-Outflow Operating Scenario or LOS (preferred project Alternative 4, scenarios H1 and H2) does not include the Fall X2 requirements. These operating scenarios should be removed from consideration, or revised to include Fall X2.

The Delta Reform Act and the Delta Plan call for updated flow objectives for the Delta. These objectives are intended to be established through the State Water Resources Control Board’s updates to the San Francisco Bay-Sacramento/San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta WQCP), and should be used to guide the operating scenarios for Delta outflow in the BDCP. The DEIR/S needs to address how natural resources protection can be assured if the project is constructed prior to updating flow objectives.

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1 Federal Agency Comments Received on the Bay Delta Conservation Plan (BDCP) Second Administrative Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), July 18, 2013.
2 BDCP DEIR/S Chapter 6, Figures 6-8 through 6-23 and Mount et al. 2013, pp. 118-122.
3 Delta Stewardship Council October 2011 e-newsletter.
2. The Draft Plan fails to fulfill the requirements of an NCCP/HCP to achieve conservation in the Plan Area, and instead may contribute to significant declines and potential extinction of several salmon runs and other native fisheries. The DEIR/S should be revised to reduce significant impacts to listed fish species, and include effective, proven measures to mitigate or reduce the significance of these impacts.

BDCP’s premise is to restore more natural flows to the Delta, but: 1) as mentioned above, it fails to increase Delta outflows and in fact increases exports under certain operating scenarios; and 2) creates new reverse flows in the North Delta and increases or maintains reverse flows in the South Delta during the critical spring period (April-May) and in drier years.4

As analyzed by the independent expert review panel convened in 2013 by the Nature Conservancy and American Rivers, export reliability for the HOS is not substantially different from the No Action Alternative (NAA) while changes in outflow, even under the HOS, provide little ecological benefit: The NAA outperforms the HOS fifty percent of the time, and the HOS appears to only provide significant water supply benefits over the NAA in the wettest years.5

One of the objectives of the BDCP is to decrease exports during dry periods when impacts on the ecosystem are greatest. In comparison to the no project alternative, however, the new facility does not appear to significantly reduce pressure on the Delta during drier periods. If the BDCP’s premise is to contribute to recovery of listed smelt and salmonids, how much improvement can be expected given the continued reliance on South Delta export facilities in drier years? The Draft Plan proposes no solution to the South Delta facility entrainment problem other than reducing overall frequency of use.6 Entrainment on the South Delta pumps must be addressed in the BDCP as a condition of the permits.

The new North Delta facility is predicted to have significant negative impacts on out-migrating juvenile winter-run and spring-run Chinook salmon through impingement, predation, increased transit time to the Delta, and increased risk of diversion into the interior Delta.7 The reduction in suspended sediment delivery may also have a negative impact on Delta smelt, which prefers sediment-laden waters.8 The potential for success of the proposed mitigation strategies is highly uncertain and have been characterized by scientific experts as “unlikely to contribute significantly to recovery of these species”.9 The DEIR/S should address and justify the inclusion of this facility as a component of an HCP/NCCP in the light of these findings.

3. Impacts to areas downstream of the Plan Area, e.g., San Francisco Bay, are potentially significant and must be analyzed in the DEIR/S; mitigation measures should be identified as well.

The Delta Independent Science Board’s review of the DEIR/S has found the document falls short of the “good enough” scientific standard, specifically in the neglect of possible impacts to such

4 Mount et al. 2013; BDCP DEIR/S Chapter 6, pp. 6-100
5 Mount et al. 2013, p. 25.
7 Mount et al. 2013.
9 Mount et al. 2013, p. 2.
downstream areas as the San Francisco Bay. The justification for exclusion of the San Francisco Bay offered in the DEIR/S is questionable or missing. The Bay is hydrologically connected to the Delta, and the Bay and Delta together function as one estuarine system. Some possible impacts are identified but not analyzed; other impacts are absent from the document altogether as discussed below:

**Sediment**
The BDCP DEIR/S has estimated a potential reduction of suspended sediment delivery to San Francisco Bay of approximately eight to ten percent. As stated by the Delta Independent Science Board, this is a potentially significant change that must be analyzed in the DEIR/S. Suspended sediment delivery to the San Francisco Bay has been declining for the past sixty years, and scientists have determined all parts of the Bay except for the South Bay to be net erosional in recent years. With climate change and associated sea level rise, further reductions in sediment delivery could have significant impacts on wetland restoration efforts, flood and erosion protection. Reduced sediment delivery will also reduce turbidity and increase the risk of nutrient loading problems and toxic algae blooms. The DEIR/S should address the importance of sediments in the Bay-Delta ecosystem and must include an analysis of how the proposed operations might affect sediment transport, delivery, and rate of deposition downstream.

**San Francisco Bay Aquatic Species**
Aquatic species that use the lower salinity of San Francisco Bay as a nursery, such as Dungeness crab, Pacific herring, northern anchovy, and Bay shrimp, are not included in the DEIR/S analysis. In addition, freshwater inflows from the Delta are rich in nutrients and other food sources for fish in the Bay. San Francisco Bay inflows create brackish water habitats, provide transport flows for eggs, larvae and juveniles, and carry nutrients and other materials important for ecosystem productivity. The amount of nutrients in the Bay drives the food web and affects abundance of aquatic species. Large freshwater pulses through the estuary and Golden Gate help support the productivity of nearshore waters for Pacific Coast marine mammal and waterbird populations. An analysis of potential impacts to these species must be included in the Final EIR/S.

**San Francisco Bay Water Quality**
The further reduction of freshwater flows, particularly under the Low Outflow Scenario of the preferred project alternative, may increase the concentration and residence time of contaminants such as selenium in the North Bay. Analysis of this potential impact has not been provided in the DEIR/S and must be included in the Final EIR/S.

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10 Delta Independent Science Board 2014, p. 3.
11 BDCP Draft Plan Chapter 4, p. 4-7 states: “Areas downstream of the Delta (e.g., San Pablo Bay, San Francisco Bay south to Golden Gate and Bay Bridge) were considered and were not included as a part of the BDCP’s analysis. For additional discussion on this, see Appendix 5.C of the BDCP, Flow, Passage, Salinity, and Turbidity, Section 5.C.5.2 Upstream Habitat Results.” However, the referenced Appendix and its related documents contain no mention of San Francisco Bay.
13 Delta Independent Science Board 2014, p. 3.
15 Cloern et al. 2007.
16 CDFW 1987, p. 25.
17 Linville et al. 2002.
4. Certain water quality impacts within the entire Bay-Delta Estuary have been determined to be significant and unavoidable, yet no mitigation is proposed for these impacts. The DEIR/S should include changes to operational proposals and other feasible mitigation measures to reduce or avoid these significant water quality impacts.

As mentioned previously, the Bay-Delta WQCP provides objectives for water quality under the direction of the Clean Water Act. The State Water Resources Control Board is in the midst of updating this plan and determining updated flow and salinity objectives that balance all beneficial uses of the system. Any management plan that violates current objectives must not proceed without adequate and specific mitigation measures.

One of the most significant impacts to water quality results from decreased Delta outflow, either as the direct result of project operations or as the result of project operations combined with sea level rise. Decreased Delta outflow degrades water quality in the form of increases in chloride concentrations, salinity, and electrical conductivity (EC):

*Particularly in the west Delta, sea water intrusion as a result of sea level rise or decreased Delta outflow can increase the concentration of salts (bromide, chloride) and levels of electrical conductivity. Conversely, increased Delta outflow (e.g., as a result of Fall X2 operations in wet and above normal water years) will decrease levels of these constituents.*\(^{18}\)

A straightforward solution exists by reducing the level of diversions proposed during dry or below normal years. We request that the DEIR/S be revised to include an alternative that would avoid significant adverse impacts by ensuring higher Delta outflows.

**Chloride (WQ-7)**
Under the Preferred Alternative, chloride concentrations, as an indication of tidal intrusion, are anticipated to increase substantially in the Delta in violation of Bay-Delta Plan objectives, as stated in Chapter 8 of the DEIR/S:

*"Relative to Existing Conditions, all of the Alternative 4 H1–H4 Scenarios would result in substantially increased chloride concentrations in the Delta such that frequency of exceeding the 150 mg/L Bay-1 Delta WQCP objective would approximately double."*\(^{19}\)

Additionally, chloride is projected to increase in Suisun Marsh, with possible negative impacts to such aquatic wildlife as benthic macroinvertebrates and amphibians. No mitigation measures have been proposed for impacts to fish and wildlife in the Delta; those mitigation measures that have been proposed for impacts to Suisun Marsh remain uncertain and primarily consist of monitoring and consultation. No substantial, feasible, committed mitigation has been proposed to address these problems; as a result, these adverse impacts remain significant and unavoidable. These adverse impacts could be avoided with the release of higher Delta outflows.

**Salinity and Electrical Conductivity (WQ-11)**
The changes in Delta water export operations proposed by the preferred project alternative will result in violations of the Bay-Delta WQCP.

\(^{18}\) BDCP DEIR/S Chapter 8, p. 8-226.
\(^{19}\) BDCP DEIR/S Chapter 8, p. 8-428.
Long-term average annual Delta outflow is anticipated to decrease under Alternative 4 by between 864 (scenario H1) and 5 TAF (scenario H4) relative to the No Action Alternative, due only to changes in operations.

Relative to Existing Conditions, Alternative 4, Scenarios H1–H4, would result in an increase in the number of days the Bay-Delta WQCP EC objectives would be exceeded in the Sacramento River at Emmaton, San Joaquin River at San Andreas Landing and Prisoners Point, and Old River near Middle River and at Tracy Bridge (Appendix 8H, Table EC-4). The percent of days the Emmaton EC objective would be exceeded for the entire period modeled (1976–1991) would increase from 6% under Existing Conditions to 23–25%, depending on the operations scenario, and the percent of days out of compliance would increase from 11% under Existing Conditions to 35–38%, depending on the operations scenario.20

The DEIR/S proposes to address this impact by requesting a move of the EC objective from Emmaton to Three Mile Slough, approximately 2.5 miles upstream.21 Moving the compliance point to a more easily achieved location is not an acceptable means of addressing this degradation in water quality. Furthermore, this move requires approval from the State Water Resources Control Board, a substantial assumption given the multitude of factors that must be considered in making such a change. The DEIR/S should address the potential adverse impacts of this increase and provide a scenario that would reduce the number of days the objectives are exceeded without moving the compliance point.

Methylmercury (WQ-13 and WQ-14)
According to the DEIR/S, estimates of methylmercury concentrations in water and fish tissue as the result of CM1 (North Delta facility) operations were found to exceed Total Maximum Daily Load (TMDL) guidelines for the Delta.22 Total Maximum Daily Load guidelines are established through the Clean Water Act as a means to protect beneficial uses of water bodies. Any exceedance of a TMDL should be addressed through mitigation and in particular the cumulative impacts of exceeding TMDL standards should be addressed in the DEIR/S. Mitigation should be discussed and include avoidance of the impact or additional measures. It is unacceptable that the DEIR/S analysis considers the change in concentrations to be small and therefore not an adverse impact.

Selenium (WQ-18)
As noted in the DEIR/S, the restoration of tidal wetland, freshwater marsh, and floodplain habitat is projected to degrade water quality by measurable levels on a long-term basis, causing the impairment of beneficial uses to be made worse.23 Yet the conclusion is drawn that, relative to baseline conditions, all operational scenarios under the preferred project alternative would result in essentially no change in selenium concentrations throughout the Delta.24 These conflicting statements are confusing at best, and indicate either a lack of sufficient analysis or adequate explanation of the potential degradation caused by the conservation measures. Selenium impacts are addressed in the Environmental Commitments through Avoidance and Minimization Measure 27 (AMM27), Selenium Management. AMM27 essentially consists of the commitment to manage water and vegetation levels as feasible, to reduce selenium concentrations, and to define adaptive management strategies that can

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20 BDCP DEIR/S Chapter 8, p. 8-436.
21 BDCP DEIR/S Chapter 8, p. 3-188.
22 BDCP DEIR/S Chapter 8, p. 8-444.
23 BDCP DEIR/S Chapter 8, p. 8-768.
24 BDCP DEIR/S Chapter 8, p. 8-474.
be implemented as feasible. These types of activities are vague and provide little assurance that further water quality degradation will not occur. Where measurable water quality degradation is a potential outcome, the DEIR/S should define specific and definite environmental commitments to mitigate for this negative impact.

5. The Draft Plan fails to ensure funding for the conservation plan, as required by the Endangered Species Act and Natural Communities Conservation Planning Act, and it does not make an equitable commitment to the co-equal goals required under Delta Reform Act. These commitments must include financing, representative governance, and assurances for the completion of the non-facility conservation measures (CM2-CM22). The DEIR/S should be revised to ensure compliance with the Delta Reform Act through definite and specific commitments to protecting, restoring, and enhancing the Delta ecosystem.

The stated premise of the BDCP is to meet the coequal goals of the Delta Reform Act by increasing water supply reliability and protection and restoration of the Delta ecosystem. Without an equitable commitment to financing and assurances, however, the likelihood of success of restoration efforts in the BDCP is highly uncertain. We acknowledge the inherent tension between the state-mandated coequal goals of water supply reliability and restoration; but the key to achieving balanced progress toward these goals is an equitable commitment of funding, governance, and assurances. We do not see that represented in the current draft of the BDCP or DEIR/S, nor does the DEIR/S provide convincing evidence that the BDCP will achieve the coequal goals.

Funding
Under the federal Endangered Species Act (ESA) and the state Natural Community Conservation Planning Act (NCCPA), Habitat Conservation Plans and Natural Community Conservation Plans must ensure that adequate funding is provided to carry out the conservation actions identified in the plan, including the sufficiency of mechanisms for long-term funding of all components of the plan and contingencies. Funding is not ensured for habitat restoration actions for the lifetime of the permit under the Public Draft of the BDCP. The Draft IA identifies three primary sources of funding for the project: state and federal water contractors, state water bonds, and federal appropriations. These sources are far from ensured: reliance on voter approval of water bonds and the continuation of federal appropriations to fund the habitat restoration components of the project is highly uncertain in comparison to the funding identified for the construction of the new North Delta facilities (CM1). The DEIR/S must address this deficiency and its effect on the feasibility and certainty of the proposed measures to protect species.

Finally, the California Water Action Plan released in January 2014 takes a vital step toward a sustainable, twenty-first century approach to water resources management. Yet the Public Draft BDCP does not reliably implement any of the priorities identified in the California Water Action Plan,

25 BDCP DEIR/S Chapter 8, pp. 8-473-474.
26 BDCP DEIR/S Executive Summary, p. ES-10.
28 Draft IA p. 45.
29 The priority actions identified in the California Water Action Plan are: 1. Make conservation a California way of life; 2. Increase regional self-reliance and integrated water management across all levels of government; 3. Achieve the co-equal goals for the Delta; 4. Protect and restore important ecosystems; 5. Manage and prepare for dry periods; 6. Expand water storage capacity and improve groundwater management; 7. Provide safe water for
indicating that the BDCP is neither a responsible management plan for the state’s resources nor a wise investment of public funds.

**Governance**

Agencies, local governments, and advocates for natural resources need to have meaningful roles in the proposed governance structure to ensure that ecosystem restoration has coequal status under the BDCP. According to the Draft IA, the Adaptive Management Team will consist of the following voting members: representatives of DWR, USBR, a single representative each from Central Valley Project (CVP) and State Water Project (SWP) contractors, California Department of Fish and Wildlife, National Marine Fisheries Service, and US Fish and Wildlife Service. This appears to total seven voting members, with the majority held by water suppliers. Thus, in difficult operational decisions, the structure of the Adaptive Management Team is weighted in favor of the water suppliers. The DEIR/S should address how this proposed governance structure can assure the protection of the state’s water, species and other natural resources. We suggest adding a non-governmental representative for wildlife and natural resources.

**Assurances**

The “no surprises” rule in a Habitat Conservation Plan (HCP) provides the applicants with regulatory assurance that applicants will not have to devote additional land, water, or money to the project should unforeseen circumstances arise. In contrast, the assurance of Rough Proportionality provided in the Draft IA is vague and lacks a schedule to test for Rough Proportionality. Given the uncertainty of estuarine conditions over the next 50 years, specific regulatory assurances need to be provided to the public that mitigation and restoration will take place. Scenarios that would provide such assurances should be addressed. For example, if funding is not secured for needed habitat restoration, construction of the North Delta facilities must be suspended until funding is secured.

Additionally, the BDCP relies too heavily on adaptive management as a tool to address uncertainty. This has the effect of further reducing assurance that project management and implementation will adequately protect natural resources. The adaptive management program needs further development and specificity, as noted by the Delta Independent Science Board (DISB)’s Review of the Draft DEIR/S, dated May 15, 2014: “The reviewed documents posit adaptive management of an uncertain future without examining plausible outcomes. The Draft BDCP presents adaptive management more as a notion than as a tested, problematic practice.”

6. **The BDCP does not reduce reliance on the Delta, as mandated by state law. The Draft Plan and DEIR/S should be revised to develop and analyze a proposed project and one or more alternatives that comply with this mandate.**

By maintaining or increasing current CVP and SWP exports from the Delta, the BDCP fails to reduce reliance on the Delta as mandated by the Delta Reform Act, Section 85021, which states, “The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency.” We commend the authors of the California Water Action Plan for developing a suite of priority actions that implement this strategy. The current BDCP Draft Plan and DEIR/S do not

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30 Draft IA p. 30 and Ebbin, personal communication.


32 Delta Reform Act, Section 85021.
contribute to these priority actions. Why should Californians dedicate substantial public funds to a plan that does not reduce reliance on the Delta and does not encourage the priority actions of the California Water Action Plan? The DEIR/S should provide a project alternative that reduces reliance on the Delta as part of the larger portfolio of actions that will help implement the California Water Action Plan.

Conclusion

The BDCP is an ambitious attempt to address the Delta problem; however, the deficiencies identified here indicate that substantial improvement is needed. Many of these deficiencies are caused by the failure of the BDCP to improve timing and quantity of freshwater Delta outflows. A reduction in diversions would lessen many of the negative impacts of the proposed project. We look to the EIR/EIS revisions to provide additional information, alternatives, mitigation measures and water supply solutions that will maintain and improve our public trust resources.

By choosing to maintain an unsustainable reliance on the Delta over developing alternative water supply solutions, the BDCP proponents are creating a plan that is risky, financially unsupported, unlikely to succeed in meeting the coequal goals of the Delta Reform Act, and further threatens our already degraded natural resources. The collaborative capacity of the BDCP has not yet been used to find water supply solutions among the prospective permit-holders that would enable higher Delta outflows. Although Friends understands that this is technically outside the required scope of an HCP/NCCP, we believe that this is a lost opportunity to create a broadly supported plan.

The Friends of the San Francisco Estuary (Friends) is an incorporated 501(c)(3) non-profit organization and a partner of the San Francisco Estuary Partnership (SFEP), which is a program of the Association of Bay Area Governments (ABAG) and one of 28 National Estuary Projects. We are dedicated to the restoration and management of a healthy San Francisco Bay-Delta Estuary through the development of public involvement, education, communication, and advocacy programs. The Friends also serve as an advocate for the implementation of the Comprehensive Conservation Management Plan for the San Francisco Estuary (CCMP), developed and approved in 1993 by the Governor and the U.S. EPA and revised and adopted in 2007. The mission of Friends of the San Francisco Estuary is to restore, protect, and enhance the San Francisco Bay-Delta Estuary.

Information on sources cited in this letter follows. If you have any questions about the comments in this letter, please contact Darcie Luce at (510) 282-1254 or friendsofsestuary@gmail.com.

Sincerely,

Barbara Salzman
President

cc: Felicia Marcus, Chair, State Water Resources Control Board
Mark Cowin, Director, Department of Water Resources
John Laird, Secretary, California Natural Resources Agency

att: References
References


California Water Action Plan, 2014. Prepared by the California Natural Resources Agency, California Department of Food and Agriculture, and the California Environmental Protection Agency.


Ebbin, Marc. Personal communication, June 30, 2014.


