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7 **BEFORE THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

9 **IN RE CALIFORNIA WATERFIX**
10 **CALIFORNIA DEPARTMENT OF**
11 **WATER RESOURCES AND U.S.**
12 **BUREAU OF RECLAMATION**
13 **PETITION FOR CHANGES IN**
14 **WATER RIGHTS, POINTS OF**
15 **DIVERSION/RE-DIVERSION**

TESTIMONY OF MICHAEL A. BRODSKY

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1 I, Michael A. Brodsky do hereby declare¹:

2 I. INTRODUCTION.

3 I am familiar with the evolution of the Bay Delta Conservation Plan (“BDCP”) into its
4 current guise as the California Water Fix (“CWF”). It is important to understand that CWF is still
5 the BDCP and all the statutory requirements applicable to the BDCP are applicable to CWF. I have
6 followed the development of the BDCP since 2010, and have extensively reviewed the historical
7 record of the BDCP back to its inception in 2006. I prepared and submitted extensive comments on
8 the BDCP 2013 Draft EIR/S and the 2015 Revised Draft EIR/S. I also attended numerous BDCP
9 public meetings and met separately in Discovery Bay with then Deputy Director of the California
10 Natural Resources Agency Jerry Meral regarding the BDCP’s impacts on Discovery Bay and
11 potential mitigations. I prepared and submitted extensive comments on the CWF to the Army Corps
12 of Engineers.

13 I am also familiar with the development and adoption of the Sacramento-San Joaquin Delta
14 Reform Act of 2009 (“Delta Reform Act”). I prepared and submitted extensive comments on the
15 development of the Delta Plan, pursuant to the Delta Reform Act, and attended numerous public
16 meetings of the Delta Stewardship Council and Delta Independent Science Board focusing on the
17 BDCP during and after preparation of the Delta Plan.

18 In 2013, I filed a Petition for Writ of Mandate seeking to set aside the Delta Plan for failure
19 to comply with the Delta Reform Act. I have litigated that case for over three years and extensively
20 engaged with materials expounding the relationship of the Delta Reform Act and other portions of
21 the Water Code to the BDCP, including the relationship between the BDCP, the Delta Reform Act,
22 and the respective roles and duties of the State Water Resources Control Board (“Board”) and the
23 Delta Stewardship Council with regard to the BDCP under the Delta Reform Act. Over the past six
24 years, I would estimate that I have spent over 1,000 hours studying the BDCP and its relationship to
25 the Delta and applicable California law.

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¹ Testimony will be illustrated with slides from exhibits cited herein.

1 I have also spent extensive time boating and recreating throughout the Delta since I was 13
2 years old. I currently boat throughout the Delta and frequently spend time at my home in Discovery
3 Bay. I am familiar with the Delta and Discovery Bay and understand the import of the proposed
4 CWF with respect to the changes it will bring to the Delta and Discovery Bay.

5 In 2006, the BDCP may have started with noble intentions. However, the BDCP failed in the
6 spring of 2015 when DWR abandoned its long-standing commitment to meet the “gold standard” of
7 a Habitat Conservation Plan. The BDCP promised 90,000 or more acres of restored Delta habitat.
8 That is gone. The BDCP had promised a “big gulp” and “little sip” approach to diversions—
9 diverting significant amounts of water only at times of high flow and diverting very little water
10 during the summer months. CWF has abandoned that approach and intends to accomplish its
11 primary goal of exporting full contracts amounts of water by diverting more water during the dry
12 summer months. It has turned big gulp / little sip on its head.

13 Based on my experience and familiarity with the issues surrounding CWF, and referencing
14 the expert testimony establishing specific water quality impacts, it is my opinion that injury to legal
15 users of water and human uses is unavoidable if CWF is approved in its proposed form.

16 Because it has admitted that it cannot correctly model the effects of CWF on the Delta,
17 DWR has fallen back on a “trust us” approach. Because we have done a good job of complying with
18 Delta standards in the past, we can be trusted not to misuse the enormous new diversion capacity of
19 the tunnels—so goes the argument. In my opinion, however, DWR’s behavior throughout the
20 development of the BDCP and CWF indicates that they cannot be trusted. Their response to public
21 input has uniformly been to deflect criticism rather than engage with stakeholders. Their response to
22 data that indicates impacts has been to smooth, average, and dissemble the data so that impacts are
23 hidden. (*Compare, e.g.*, DWR-5, p.59 with SCDA-18, showing DWR’s mean monthly averaging
24 hides salinity impacts; *see also* SCDA-35) They have steadfastly refused to roll up their sleeves
25 and begin the hard work of crafting a portfolio solution to accompany the new point of diversion
26 and have instead dusted off the failed 1982 peripheral canal in subterranean guise and devoted their
27 efforts to packaging and branding.

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1 DWR has attempted repeatedly to give Water Contractors inappropriate roles and outsized
2 influence over water allocation decisions. The 2013 version of the BDCP contained a complicated
3 management structure that allowed water contractors to effectively veto any reduction in exports.
4 (SCDA—6 [Mount Report noting that “when examined in detail, the draft BDCP blurs the lines
5 between implementation and regulation and grants the permittees [Contractors] unusual decision
6 authority”].) Even after this scheme, buried in techno-jargon, was brought into the light of day
7 DWR continued to push to allow those who benefit from exports to determine export amounts.

8 “Trust us” is not evidence. DWR has failed to carry its burden of demonstrating no injury to
9 legal users of water.

10 CWF is a legislatively disfavored project. The legislature declared that the Delta and
11 “California’s water infrastructure are in crisis.” (Water Code § 85001(a). The legislature set out in
12 the Delta Reform Act standards that the BDCP (including CWF) should meet if it were to be
13 legislatively favored as a part of resolving the crisis. (Water Code § 85320(b).) The legislature
14 ordained that no state funds may be expended on any aspect of CWF if it fails to meet the statutory
15 criteria set out in the Delta Reform Act for resolving the Delta’s crisis. (Water Code § 85320(b).²
16 CWF did fail to meet the criteria set out in Water Code section 85320. No state funds may be
17 expended on CWF and it comes to this Board as a legislatively disfavored project.

18 The Board has ample legal grounds to deny the Petition. If the Board considers granting the
19 Petition with conditions, those conditions should not be constrained by the limits of existing
20 infrastructure. There is ample authority for the Board to impose conditions that would force either a
21 reduction in exports south of Delta or would force DWR and Contractors to undertake a portfolio
22 approach as a part of the CWF project description, including additional surface storage, additional
23 groundwater recharge, integrated water management, and conservation, including increasing
24 regional self-reliance. These measures are all cost effective, feasible, and necessary. (SWRCB-23;
25 SCDA-40–SCDA-47; SCDA-50–SCDA-56.)

26 II. OVERVIEW OF TESTIMONY.

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² The Delta Reform Act has been offered into evidence as DWR-108.

1 In order to comply with the Delta Reform Act, CWF must demonstrate a quantifiable
2 reduction in reliance on the Delta as a source of exported water supply. (Water Code § 85021.)
3 CWF must also demonstrate that it enhances and protects the quality of water supply from the
4 Delta, including the water supply for in-Delta diverters and in-Delta human uses (Water Code §
5 85001(c).) At the same time, CWF must demonstrate that it contributes to providing a more reliable
6 water supply for the state. (Water Code § 85001(c).) Appropriate Delta flow criteria are a subject
7 for detailed consideration in Part 2 of these hearings. However, restoring Delta flows, enhancing
8 and protecting the quality of water supply in the Delta, reducing reliance on the Delta as a source of
9 exported water, and providing a more reliable water supply for the state are irrefragable parts that
10 are all required of a whole CWF if it is to comply with the Delta Reform Act. They are also
11 necessary if injury to legal users of water and human uses is to be avoided in the presence of
12 massive new diversion capacity.

13 CWF fails on all counts.

14 “The WaterFix project does not propose additional flows in the Delta.” (SCDA-34, p.3.) In
15 fact its design makes injury to in-Delta users all the more likely through increased water quality
16 violations. Under Alternative 4A, “the flexibility that Reclamation and DWR have to operate the
17 system to ensure that water quality criteria are met will be seriously diminished, and the two
18 agencies will have little room for error in operating the system to protect beneficial uses and
19 achieve the coequal goals.” (SCDA-34, p.3.)

20 CWF demonstrates that it does not advance a quantifiable reduction in reliance on the Delta
21 as a source of exported water. (DWR-5, pp. 34–40.) The only exception is a claimed reduction in
22 combined deliveries to south of Delta SWP and CVP water service contractors. (DWR-5, p. 41.)
23 However, this reduction occurs only at Boundary 2.

24 Under the current configuration of the CVP and SWP (without CWF), high quality
25 Sacramento River water flows through the channels and sloughs of the Delta before reaching the
26 existing diversion points in the south Delta. (DWR-1, p.8; SCDA-19; SCDA-36, p.2; SCDA-33,
27 p.1.) With the new NDD, CWF proposes to divert for export south of the Delta significant quantities
28 of water *before* that water flows through the Delta. The NDD may “enhance the quality of water

1 supply from the Delta,” as required by Water Code section 85001(c), for south of Delta export
2 contractors, but it degrades the quality of water supply from the Delta for in-Delta diverters and in-
3 Delta human uses. (SCDA-26 [USEPA letter noting that while NDD “would improve the water
4 quality for agricultural and municipal water agencies that receive water exported from the Delta,
5 water quality could worsen for farmers and municipalities who divert water directly from the
6 Delta”].)

7 CWF fails to provide a more reliable water supply for the state because it is a single-focus
8 project without any of the portfolio elements that a consensus of the relevant scientific community
9 agrees are indispensable for improving the reliability of California’s water supply. (*See* SCDA-40,
10 pp. 14–17 and attachments thereto; SCDA41–SCDA-46.) The failure to include portfolio elements,
11 the upstream location of the NDD, and the increasing likelihood of longer and more severe droughts
12 due to climate change means that Temporary Urgency Change Petitions (“TUCPs”) will be used to
13 allow diversions to continue at the upstream NDD while the interior Delta is allowed to become
14 salty and degraded. This structural change in the system constitutes injury to legal users of water
15 within the Delta³, regardless of the Board’s authority to suspend D-1641 standards through TUCPs.
16 Neither meeting D-1641 standards nor the lawful suspension of those standards equates to non-
17 injury to legal users of water and human uses. If water quality is degraded due to CWF to the extent
18 that those users are injured-in-fact, that constitutes legal injury regardless of whether D-1641 is
19 being met or has been lawfully suspended.

20 CWF fails to restore Delta flows to the injury of legal users of water and human uses within
21 the Delta. Restoring Delta flows means more fresh water flowing through the Delta. (SCDA-26
22 [USEPA letter noting that “diminished seaward flows have played a significant role” in degrading
23 Delta water quality].) CWF as proposed for most of its operating range does the opposite. CWF
24 conflates some reductions in reverse Old and Middle River flows (“OMR”) with restoring Delta
25 flows. OMR reverse flows are a problem and CWF does take steps to address this problem.

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28 ³ In its ruling of August 24, 2016, the Board placed certain evidentiary limitations on Save the California Delta Alliance. However, the Board made clear that Delta Alliance “may argue based on any evidence that is admitted into evidence that the WaterFix petition will cause injury to legal users of water.” (August 24 Ruling, p.2.)

1 However, it reduces OMR flows by diverting less water at the existing points of diversion and
 2 shifting diversions upstream of most of the Delta. This strategy for reducing OMR flows *reduces*
 3 fresh water flow through the Delta. As far as restoring Delta flows, CWF takes ten steps backward
 4 and one step forward.

5 Capturing water at times of high flow and storing that water for use at times of scarcity is an
 6 essential element of any plan to divert water at an upstream location that could both make the water
 7 supply for the state more reliable and avoid injury to legal users of water in the Delta. Diverting
 8 water during wet conditions, storing it, and reducing diversions during dry periods takes pressure
 9 off the Delta. However, “[f]or the purposes of BDCP simulation modeling

10 , south of Delta storage was limited to space within San Luis Reservoir. Operations during
 11 wet and above average conditions are often constrained by available space to store water in this
 12 facility. Expanding potential storage, particularly groundwater storage, would have created
 13 considerably more flexibility in exports, particularly during wet years.” (SCDA-6, p. 22.) Because it
 14 lacks expanded storage, “*BDCP therefore does not achieve the broader goal of reducing pressure*
 15 *on the Delta during dry years by shifting exports to wet years,*” (SCDA-6, p.27, emphasis original.)
 16 It is precisely during these dry years that water quality is degraded the most to the detriment of in-
 17 Delta users. In order to make sense, the new points of diversion must be part of a “Better System:
 18 Storing Floods to Ride Out Droughts (and Give the Delta a Break).” (SWRCB-23⁴, p. ES-6.) CWF
 19 has expressly rejected this strategy. (SCDA-27, p. 2 [DWR publication “Your Questions
 20 Answered,” noting that “[w]hile water storage is a critically important tool for managing
 21 California water resources, developing new water supplies and including new storage is not part of
 22 the BDCP ... [and] was eliminated from consideration” early in the process].)

23 The goal and design of CWF is to maximize exports:

24 [T]he models sought to meet the requirements of D-1641, the remanded BiOps,
 25 reservoir and diversion facility constraints, and south of Delta storage. The objective
 26 function was then to maximize Delta exports within those constraints.
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⁴ Delta Alliance introduces the Delta Plan (SWRCB-23) into evidence and I attest SWRCB is a true and correct copy.

1 (SCDA-6, p. 24.) Given all existing constraints, including inadequate storage capacity and
2 regulatory constraints, how can we export more water, was the question CWF planners posed. Their
3 answer is currently before the Board.

4 The Board need not prescribe what sort of facilities must be built to allow for a big gulp
5 little sip result that would allow for increased diversion capacity and at the same time avoid injury
6 to legal users and human uses. However, the Board can impose performance conditions on approval
7 of a new point of diversion that would act as “infrastructure forcing” standards, allowing DWR and
8 Contractors to determine what portfolio elements are best to accompany the change in point of
9 diversion for the benefit of water suppliers within and without the Delta. Performance conditions
10 might be moving toward the 2010 Flow Criteria Report or Alternative 8 flows (based on SWRCB
11 staff suggestions) over time.⁵

12 III. DETAILED TESTIMONY

13 A. CWF FAILS TO REDUCE RELIANCE ON THE DELTA AS A SOURCE OF
14 EXPORTED WATER AND FAILS TO ENHANCE THE QUALITY OF WATER
15 SUPPLY FROM THE DELTA RESULTING IN INJURY TO LEGAL USERS OF
16 WATER AND HUMAN USES.

17 Water Code section 85001(c) provides that:

18 By enacting this division, it is the intent of the Legislature to provide for the
19 sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide
20 for a more reliable water supply for the state, to protect and enhance the quality of
21 water supply from the Delta, and to establish a governance structure that will direct
22 efforts across state agencies to develop a legally enforceable Delta Plan.

23 The legislature’s intent was to “enhance the quality of water supply from the Delta” for in-
24 Delta users and export Contractors alike. Although DWR reads this paragraph to apply only to the
25 quality of water exported from the Delta, there is no such limiting language and no evidence that the
26 legislature meant anything other than what it said. Likewise, a “more reliable water supply for the
27 state” includes those portions of the state that are within the Delta and rely on water diverted from
28 the Delta.

⁵ Delta Alliance will propose detailed conditions based on operating rules for CWF and demonstrate that those operating rules are feasible given the potential for infrastructure improvements that would make them cost-effective and feasible in its rebuttal testimony.

1 Water Code section 85021 provides that:

2 The policy of the State of California is to reduce reliance on the Delta in meeting
3 California’s future water supply needs through a statewide strategy of investing in
improved regional supplies, conservation, and water use efficiency.

4 Water Code sections 85001 and 85021 are binding on the Board and all other state agencies making
5 decision that impact the Delta.

6 The trial court decision in The Delta Stewardship Council Cases is directed at the
7 Contractors’ contention that they may not be required to comply with sections 85001 and 85021.
8 As such, the trial court’s interpretation of the Delta Reform Act illuminates these proceedings
9 before the Board insofar as it sheds light on the intent of the legislature in enacting the Delta
10 Reform Act with respect to rights to export water from the Delta. The trial court held:

11 The plain language of section 85021 requires all water supply needs beyond the date
of its adoption to be balanced, and reduced reliance must be a part of this balancing.
12 There is no indication that section 85021 only affects water uses above current
levels.

13 (SCDA-19, p. 43: 12–15.) The trial went on to hold that the requirement of reduced reliance is not
14 contravened by existing water rights or the savings clauses of the Delta Reform Act. With regard to
15 “water right applications,” the trial court held that the requirement of reduced reliance:

16 ... is merely a statutory enumeration of the principle of reasonable use and the
17 public trust doctrine. Section 85023 provides ‘[t]he longstanding constitutional
18 principle of reasonable use and the public trust doctrine shall be the foundation of
state water management policy and are particularly important and applicable to the
Delta.’ Accordingly, the legislature affirmed its intent that these principles continue
19 to apply to limit an owner’s interest in water.

20 (SCDA-19, p. 31: 9, 18–23.)

21 The trial court’s interpretation of the Delta Reform Act is consonant with longstanding
22 legislative intent to reduce exports from the Delta. (Water Code § 10013 [stating intent to
23 “minimize the need to import water from other hydrologic regions;”] Water Code § 10620(f)
24 [stating intent to “minimize the need to import water from other regions;”] Stats. 2001, c.320, § 1(c)
25 (SCDA-30) [“The legislature finds and declares” that the “well-being of the people of California
26 will be best served ...[by limiting exports] in the foreseeable future to mov[ing] surplus supplies
27 between regions,” emphasis added].) Surplus supplies are those supplies available after all in-Delta
28 needs are met.

1 The Board was not a party to the Delta Stewardship Council cases and the decision is not
2 directly binding on the Board. However, the trial court’s interpretation of the Delta Reform Act
3 would mean that the Act would require the Board to impose permit conditions achieving reduced
4 reliance and enhanced water quality supply for in-Delta users, pursuant to Water Code sections
5 85001 and 85021. These issues are directly relevant to Part 1 of the hearings as they implicate the
6 water rights of DWR and of in-Delta diverters.

7 DWR essentially does not dispute that the quantity and quality of water available for in-
8 Delta diverters and human uses will be degraded. However, their two-pronged argument that
9 degrading water quality and diminishing water quantity does not constitute injury is that 1) they will
10 continue to meet the terms of D-1641 and meeting D-1641 equates to non-injury to in-Delta legal
11 users and human uses; and 2) any reduction in quantity or quality of water for in-Delta diverters and
12 human uses is the result of stored water not flowing through the Delta, and in-Delta users have no
13 right to stored water.

14 CWF “may result in substantial changes in Delta flows compared to the expected flows
15 under existing Delta Configuration” without CWF. (SWRCB-104, p. 3-83.) “The new water dual
16 conveyance facilities proposed as part of the CA WaterFix (WaterFix or CWF) project would create
17 substantial changes in the aquatic environment of the lower San Joaquin and Sacramento Rivers, the
18 Delta, and downstream estuarine areas.” (SCDA-1, p. 3.) “The Panel believes that the PA [CWF]
19 will create more than an incremental change to the Bay Delta System. It will effect major changes
20 in hydrodynamics and associated transport throughout the system downstream of the North Delta
21 Diversions” with uncertain consequences. (SCDA-1, p. 15.) “Changing the primary point of
22 diversion of water export of the Delta to three inlet facilities in the northern Delta along the
23 Sacramento River rather than from the southern Delta will result in major change in the circulation
24 patterns and associated transport of water and constituents throughout the entire Delta system.”
25 (SCDA-1, p.16.)

26 After CWF the Delta will be a different Delta. D-1641 compliance points were prescribed
27 based on pre-CWF flow patterns. It is not reasonable to assume, as DWR does, that after CWF
28 existing D-1641 compliance points will capture Delta water quality. And meeting a standard at a D-

1 1641 compliance point does not mean that water quality at non-compliance points has not been
2 significantly degraded. Meeting D-1641 does not equate to non-injury before CWF's changes to
3 flow patterns and certainly does not equate to non-injury after CWF. (SCDA-10 p.2; SCDA-29, p.3;
4 SCDA-36, p.6.)

5 DWR's "reservoir theory" of non-injury will be fully tested on cross-examination of the
6 water rights panel, which is yet to occur, and on testimony of rebuttal witnesses after cross-
7 examination is completed. However, DWR is doing more than moving their water in a different
8 way. They are making major changes in the hydrodynamics of the entire Delta system in a way that
9 degrades the quality of water supply from the Delta for in-Delta users, in contravention of Water
10 Code § 85001(c). Detailed consideration of appropriate Delta flow criteria are scheduled for part 2
11 of the hearings. However, appropriate Delta flow criteria are not limited to fish and wildlife
12 purposes. Protecting the beneficial use of in-Delta users is also a part of appropriate Delta flow
13 criteria. Water Code section 85086(b) provides that:

14 It is the intent of the legislature to establish an accelerated process to determine
15 instream flow needs of the Delta for purposes of facilitating the planning decisions
that are required to achieve the objectives of the Delta Plan.

16 The objectives of the Delta Plan are statutorily prescribed to include the provisions of Water Code
17 sections 85021 and 85001(c). The instream flow needs of the Delta include the need to "enhance the
18 quality of water supply from the Delta." (Water Code § 85001(c).)

19 The Board is one of a committee of agencies responsible for implementing the Delta Reform
20 Act. (Water Code § 85204) The Board should condition any approval of CWF on a reduction in
21 reliance on the Delta as a source of exported water and enhancing the quality of water supply from
22 the Delta for in-Delta users as well as exporters.

23 **B. CWF WILL DEGRADE THE WATER QUALITY IN DISCOVERY BAY TO THE**
24 **INJURY OF HUMAN USES.**

25 Water quality in the Delta and in and around Discovery Bay will be degraded by CWF.
26 Under the current operating scenario, without CWF, high quality Sacramento River water must flow
27 through the Delta before reaching the export pumps. The concentration of nutrients in Sacramento
28 River water in the vicinity of the proposed NDD is lower than the concentration of nutrients in the

1 central and south Delta. When Sacramento River water flows through the Delta on the way to the
2 export pumps it dilutes the nutrient load in the central and south Delta.

3 Agricultural return flow traveling in the San Joaquin River from Central Valley farms back
4 into the Delta carries a very high nutrient load and combines with the higher nutrient load already
5 present in the central and south Delta. The agricultural return flow from the Central Valley is also
6 responsible for the salinity problem in the south Delta. It is the operation of the projects, carrying
7 water to Central Valley farms and carrying polluted return flow back to the Delta, that is offset by
8 being diluted with Sacramento River water traveling through the Delta on the way to the export
9 pumps. (*See* testimony of Tom Burke and Erik Ringelberg SCDA-35 and SCDA-32.)

10 If diversions are shifted to the proposed NDD, this dilution effect will be reduced or
11 eliminated. This will result in a higher nutrient loads for waters in and around Discovery Bay.
12 Higher nutrient loads lead to algal blooms which reduce dissolved oxygen and lead to
13 eutrophication and hypoxia. Algal blooms include toxic blue-green algae, which is a severe threat to
14 human health of the residents of Discovery, especially children who may enter the waters of
15 Discovery Bay despite warnings to the contrary. (SCDA-22; SCDA-33) It is also a threat to pets.
16 (SCDA-22, p.3). Livestock wade into and drink the water of Kellogg Creek so the algae is also a
17 threat to the watering of livestock, which is injury to legal users of water. At a qualitative level of
18 analysis, shifting diversions to the NDD would be expected to negatively impact water quality in
19 and around Discovery Bay. DWR's reservoir theory does not account for the fact that they are
20 responsible for a significant amount of the pollution that through-Delta conveyance serves
21 somewhat to offset.

22 The health of the Discovery Bay community depends on many human uses of Delta waters,
23 and impacting the water quality will injure these human uses. (*See* SCDA-22; SCDA-24; SCDA-
24 25.)

25 CWF will also degrade water quality for farms (legal users) in the vicinity of Discovery
26 Bay.

27 C. CWF WILL IMPAIR FLOOD CONTROL IN DISCOVERY BAY.

28 In the winter of 2014, flooding occurred in Discovery Bay along Sand Point Road. This

1 flooding was caused by an invasive species, the Asiatic Clam, infesting Discovery Bay's storm
2 drains. The clams entered the storm drain system from the bays of Discovery Bay. Very cold water
3 events kill Asiatic clams or reduce their populations. CWF will tend to reduce very cold water
4 events in Discovery Bay, exacerbating the Asiatic clam problem. The effect of CWF on water
5 temperatures in Discovery Bay will tend to maintain temperatures in a range hospitable to the
6 Asiatic clam, making flooding events more likely. Higher nutrient levels caused by CWF will also
7 encourage growth of Asiatic clam populations.

8 With expanding clam populations, it is likely that the clams will also colonize the siphon
9 pipes that connect the bays of Discovery Bay with each other and serve as Discovery Bay's
10 circulation system. This will increase hydraulic residence time with all the attendant water quality
11 problems. Clogging the siphon pipes may also cause flooding in Discovery Bay.

12 D. THE LIKLIHOOD OF MORE SEVERE AND MORE FREQUENT DROUGHTS
13 COMBINED WITH CWF'S LACK OF STORAGE AND OTHER PORTFOLIO
14 ELEMENTS WILL CAUSE INJURY TO LEGAL USERS AND HUMAN USES
IN THE DELTA.

15 DWR sought to portray severe water quality problems in the Delta during the most recent
16 drought as an aberration and excluded periods when TUCPs suspended D-1641 from its calculations
17 of water quality compliance rates.

18 However, more frequent and severe droughts are expected to be the norm going forward.
19 (SWRCB-46, p. ES-7 [climate change will make drought "all the more severe;] SWRCB-46, p. 17
20 ["Summary of Anticipated Changes Affecting the Delta" include "[i]ncreased weather variability,
21 including longer-term drought;"] SCDA-31, p. ii ["Periodic droughts, projected to become more
22 frequent and severe with climate change, present a significant planning challenge for California's
23 water agencies;"] SCDA-31, p. 1 ["Droughts are a natural occurrence in California (Cal. Climate
24 Action Team 2006; (California Department of Water Resources (DWR 2005), and climate change is
25 predicted to increase their number and intensity (Hayhoe et al. 2004);"]). Even without climate
26 change, droughts are a regular feature in California. (SWRCB-46, p. 66 ["The historical record
27 shows that California has frequently experienced long multiyear droughts, as well as extremely wet
28 years that coincide with substantial flooding and consequent risk to people and property (Hank et al.

1 2011)”.].)

2 During the most recent drought DWR installed a drought barrier on False River so it could
3 continue pumping without drawing saltwater into the pumps from the bay during periods of very
4 low flow when water quality standards were not being met. Conditions that brought about this
5 situation are likely to repeat themselves more often, more severely, and for more prolonged periods
6 in the future. However, with the addition of the NDD, DWR will simply switch pumping to the
7 NDD and allow salt water to intrude into the Delta with no concern. There is nothing in the CWF
8 operating rules that will prevent pumping from NDD, with no pumping from south Delta points of
9 diversion, during periods of severe drought and salinity intrusion deep into the Delta. Indeed, CWF
10 operating rules are crafted with precisely this eventuality in mind.

11 More frequent droughts will occasion more frequent use of TUCPs and the CWF will
12 severely degrade water quality to the injury of legal users and human uses within the Delta during
13 these periods. The Board should condition any approval on CWF demonstrating that it will not
14 result in more frequent or severe degraded water quality during drought periods assuming more
15 frequent and more severe droughts in the future. Conditions should require that CWF *reduce* the
16 impact of droughts on Delta water quality.

17 In order to avoid injury to legal users and human uses within the Delta and maintain new
18 points of diversion upstream of the Delta with significant diversion capacity, CWF must be able to
19 harvest much more water during wet and very wet periods so that it can avoid diverting water
20 during dry periods and periods of low flow. It cannot accomplish this without including some
21 element of storage, including groundwater storage. Additional storage is feasible, cost effective and
22 proven, especially ground water storage. (*See* SCDA-40 and attachments; SCDA-41; SCDA-42;
23 SCDA-43; SCDA-44; SCDA-45; SCDA-46.)

24 Conditions placed on CWF should include requirements to show reduced diversions during
25 dry periods, which may be accomplished by CWF altering its operating rules to require
26 replenishment of groundwater basins during wet periods. This strategy, so it is cost-effective and
27 feasible. (SCDA-47.) The banked groundwater can then be withdrawn for beneficial use during dry
28 periods in lieu of water that would otherwise be exported from the Delta. Over “21 million acre-feet

1 of additional groundwater storage is available in Southern California groundwater basins... [t]his
2 stored water could be used during times of drought or natural disaster when surface water supplies
3 are not available.” (SCDA-46, p.2.) It is cost-effective and feasible to avoid increased degradation
4 of Delta water quality during droughts by employing this strategy.

5
6 E. THE INTRUSION OF SALT WATER INTO DISCOVERY BAY WILL HARM
HUMAN USES.


7 Harm to human uses due to salinity increases in Discovery Bay and the Delta is summarized
8 in the testimony of Janet McCleery and Frank Morgan. In addition many of the docks in Discovery
9 Bay are constructed with metal frames. Metal frame docks are suitable for use in fresh water.
10 However, salt water quickly corrodes metal docks. Many of the docks in Discovery Bay are used
11 for commercial purposes. Salt water intrusions in Discovery Bay will cause millions of dollars of
12 property damage to metal frame docks. I use my boat, which is kept at my metal frame dock, to visit
13 clients in the Delta and to view Delta locations relevant to my law practice. My non-recreational
14 human use will be injured by damage to my dock caused by CWF.

15 F. THE BURDEN IS ON CWF TO ESTABLISH NON-INJURY AND THE
16 MODELING, WHICH CWF RELIES ON, DOES NOT ESTABLISH NON-
INJURY.

17 Through cross-examination, CWF’s modeling has been shown to be un-useful for both
18 absolute predictions and for comparison of scenarios. Our expert testimony further establishes that
19 CWF modeling is not useful for comparison of scenarios. (SCDA-35.)

20 The modeling should be excluded from evidence and absent the modeling CWF has no
21 evidence to establish that it does not injure human uses and legal users of water in the Delta.

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23 Executed this 2nd day of September at Discovery Bay, California,

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25 Michael A. Brodsky

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