

**CENTRAL DELTA WATER AGENCY
SOUTH DELTA WATER AGENCY
LOCAL AGENCIES OF THE NORTH DELTA**



April 23, 2014

Assemblymember Anthony Rendon
State Capitol
P.O. Box 942849
Sacramento, CA 94249-0063

Re: AB2554 As Amended March 24, 2014

Dear Assemblymember Rendon:

These comments are jointly submitted on behalf of the Central Delta Water Agency and Local Agencies of the North Delta ("LAND").¹ As interests within the Delta, we submit these comments in an effort to constructively engage primarily on the issue primarily on Bond funding for Chapter 8, Sacramento-San Joaquin Delta Sustainability. Because of our concern for existing agriculture and existing communities in the Delta we, unlike many, are not asking for additional moneys to be allocated toward our region. Instead, we urge that any Bond investments in the Delta be made with regard to the existing communities and with the recognition that any bond funded activities in the Delta must both be supported by sound science and be planned and maintained in a manner that is consistent with the maintenance of the agriculturally-based economy of the Delta.

Focusing specifically on the fish that have received so much attention, we do not believe that additional conversion of agricultural land in the Delta to so-called habitat, will help much, if at all. It is well-documented that the focal fish populations of the Delta crashed after the construction of the CVP and SWP pumps in the south Delta, well after the reclamation of the Delta islands occurred around the turn of the 19th century. Looking to habitat creation as a panacea for the damage done to the Delta by the SWP and CVP – along with other stressors – is not likely to succeed and therefore does not provide the public benefits necessary to justify Bond funding. Moreover, as explained more fully below, to the extent the SWP and CVP have

¹ LAND is a coalition comprised of local reclamation, levee and water districts in the northern geographic area of the Delta.

obligations to mitigate for existing impacts, those actions would not represent the types of actions that should be funded by the statewide bonds on behalf of all taxpayers in the state.

I. Background

We appreciate your commitment to a thorough and equitable process of developing the Water Bond. While we support certain investments in the Delta, we are concerned that AB 2554 currently allows for a significant portion of the funding to be used to shift the costs of the Bay Delta Conservation Plan (“BDCP”) away from the project contractors and onto the general taxpayers of the State. As you know, the BDCP seeks issuance of a fifty (50) year take permit of endangered species for SWP/CVP exports from the Delta.

According to the BDCP itself, “The BDCP is expected to secure a large portion of the funds allocated to Delta sustainability, as well as smaller portions of funds allocated to conservation and watershed protection.” (Draft BDCP, Chapter 8, p. 8-84 (Nov. 2013), see Exhibit A, BDCP Chapter 8 excerpts.) The exact amounts intended to be used from two separate statewide bonds are detailed in Table 8-37, and total over \$3.7 billion. It is for this reason, that proponents of BDCP have consistently called for larger funding allocations to Chapter 8 “Sacramento San Joaquin Delta Sustainability.”

Proponents of the BDCP claim that the habitat and conservation proposals in the plan as having statewide public benefits, but clear statewide benefits are not present. The current public review draft of the BDCP shows that implementation of the BDCP could potentially imperil nine key species including salmon, Delta smelt and greater sandhill cranes.² Independent scientific review has repeatedly found that the BDCP is overly optimistic with respect to the potential benefits to imperiled species by creating new habitat in the Delta, which cannot substitute for flows.³ Delta restoration projects must be developed using the best available science and criteria developed through transparent, locally inclusive processes to that actually benefit species at risk, not to fulfill regulatory requirements for one project. The so called “restoration” components of BDCP do not meet these basic criteria and should not receive public funds through a water bond or any other source. In short, it is a misnomer to call funds destined for BDCP “Delta Sustainability.”

While we oppose funding of any aspect of BDCP, some habitat improvement and

² See article by Matt Weiser, *Fate still unclear for nine species in Delta water tunnel plan* (December 18, 2014), available at: <http://www.sacbee.com/2013/12/18/6009767/fate-still-unclear-for-nine-species.html> (species include: Longfin smelt, Delta smelt, Winter Spring and Fall Chinook salmon, Green sturgeon, White sturgeon, Steelhead and Greater sandhill crane).

³ See, e.g., Delta Science Program Independent Review Panel Report (BDCP Effects Analysis Review, Phase 3), p. 25 (“The Effects Analysis does not adequately defend conclusions regarding the net effects of the BDCP, including habitat restoration. The net effects analysis tends to over-reach conclusions of positive benefits for covered fish species, given the inability to quantify the overall net effect and the realization of high uncertainty.”) ; see also Nature Conservancy and American Rivers, Panel Review of the Draft Bay Delta Conservation Plan (2013), p. 82 (“The BDCP is overly optimistic about the potential benefits to delta and longfin smelt of physical habitat restoration.”).

conservation projects could be helpful in the Delta and its watersheds. It is vital, however, that these habitat projects be conducted in a manner that is compatible with existing agricultural uses and communities in the Delta. Notably, there are already thousands of acres of land in the Delta that are already owned by the state or other entities that are already or are planned for habitat and related uses. (See Exhibit B, Habitat Types Acreage Table.) Any Bond funds should first be directed toward improving the habitat values of those lands, prior to the purchase and conversion of new lands to be modified and managed for habitat purposes. The amendments we propose below promote this direction.

From a historical perspective, moreover, it is important to note that the costs of the SWP launched by the passage of the California Water Resources Development Bond Act (1960 General Election) was to be paid by the project contractors. The argument in favor of passage clearly provided:

The provision will not be a burden on the taxpayer; no new state taxes are involved; the bonds are to be repaid from project revenues, through the sale of water and power. In other words, it will pay for itself.

(See Exhibit C, copy of the Argument in Favor of the passage; see also Exhibit D, quotation of then Governor Edmund G. (Pat) Brown in the case of Goodman v. County of Riverside (1983) 140 Cal.App.3rd 900, 906, wherein the Governor stated “the plan itself is completely self-supporting. The law provides that the contracts have to provide for the repayment of the cost of the entire Project.”

The SWP was a plan to continue to develop water projects at contractor expense to meet the obligations to the Delta and other areas of origin, including salinity control for the Delta (Water Code, §§11460 et seq. and Water Code, §§ 12200 et seq.); to preserve fish and wildlife (Water Code, §11912); and to meet the project Table A entitlements of about 4.25 million acre feet. No water was to be diverted from the Delta for use elsewhere unless adequate supplies for the Delta were first provided.

The SWP plan recognized that development within the watersheds, including recapture of project water and demands for Table A entitlements would build over time and that by the year 2000 five million acre feet per year of supplemental water delivered to the Delta would be required from developments in North Coast watersheds (Exhibit E). None of such North Coast water was developed. The lack of developed water together with the failure to provide a drainage system for the San Joaquin Valley and failure of the SWP to operate with sufficient carryover storage to meet senior obligations and water quality standards during dry years, are the causes of the crises which confronts us today.

The financial obligations of the SWP contractors should not now be shifted onto the state taxpayers. Yet, the BDCP documents clearly show the intent is to shift the cost of conservation measures claimed to be ecosystem enhancement onto the general taxpayers. Endangered fish have not been preserved by the SWP and in fact have suffered a severe decline since the start of project operations and there is no direct correlation between the fish declines and terrestrial or wetland habitat in the Delta (Exhibit F). In order to ensure the requisite public benefits,

conditions around the types of restoration projects that qualify for funding are needed – whether the restoration is BDCP related or not.

For historical perspective on why we are here now, it is important to recognize that the State Water Resources Control Board in its 1978 Decision 1485 at page 13, found that: “To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the project export pumps.” Yet Project exports were not curtailed and in fact continued to increase after 1978 (Exhibit G).

II. Specific Suggestions to March 24, 2014 Version of AB 2554

It is in the context of the above that we request the following amendments:

Page 4, lines 3-5, Section 79701(d)

Replace the last sentence with the following: “However, the planned water storage projects in the North Coast of California which were to supplement water flowing into the Delta by 5 million acre ft. per year by the year 2000 were not constructed and the water environment has deteriorated.”

Page 9, line 9, Section 79711(a)

At the beginning before “Funds” insert “Subject to the limitations in Section 79712”.

Page 9, line 15, Section 79711(b)

This language should be replaced with the following:

“(b) Funds provided by this division shall not be expended for the acquisition or transfer of water rights except for a permanent dedication of water approved in accordance with Section 1707 where the state board specifies that the water is in addition to water that is required for regulatory requirements as provided in subdivision (c) of Section 1707. The requirement that a dedication of water be permanent shall not preclude the expenditure of funds provided by this division for the initiation of the dedication as a short-term or temporary urgency change, that is approved in accordance with Section 1707 and either Chapter 6.6 (commencing with Section 1435) of, or Chapter 10.5 (commencing with Section 1725) of, Part 2 of Division 2, during the period required to prepare any environmental documentation and for approval of permanent dedication.”

This change is crucial as the proponents of BDCP intend to substitute purchase of water with public funds when the habitat creation does not show the measureable improvements for species.⁴ (See Exhibit H, a 2012 document obtained from the Kern County Water Agency showing BDCP project proponents plan to use bond funds for water purchases, also available at:

⁴ We note also that Jerry Meral, the former deputy secretary of the California Natural Resources Agency in charge of the Bay Delta Conservation Planning Program recently suggested language on behalf of the National Heritage Institute that explicitly allows for purchase of water with Water Bond funds.

http://www.contracostatimes.com/ci_10152127.) This change will protect against creation of a new version of the failed Environmental Water Account, which cost taxpayers dearly and delivered few benefits to fish. This Bond should not become the vehicle for such waste, regardless of the outcome of BDCP. Moreover, requiring water transfers to go through the normal State Water Resources Control Board Water Code section 1707 transfer process provides needed protections to the environment and would help ensure that environmental impacts of water transfers (particularly the practice of groundwater substitution) are fully reviewed and properly mitigated.

Page 9, line 21, Section 79712

Replace “agencies” with “contractors”.

Page 9, line 22, Section 79712

After the word “facilities” insert “, and the fifty (50) year ESA take permit secured through the BDCP.”

Also add the following: “Funds provided by this division shall not be expended for 1) the mitigation of any of the impacts of the State Water Project or Central Valley Project, or 2) the cost of compliance of such projects with any regulatory requirements, including without limitation biological opinions, take permits, reasonable and prudent actions, and water quality standards, or 3) the cost to carry out the affirmative obligations of the projects to preserve and restore fish and wildlife, including without limitation achieving the CVPIA restoration of anadromous fish to ensure a sustainable natural production at levels not less than twice the average levels attained during the period of 1967-1991, or 4) the costs to ensure a San Joaquin Valley drainage solution, or 5) any costs related to the Bay Delta Conservation Plan (BDCP).”

Page 17, lines 25-27, Section 79732(e)

Delete lines 25-27.

Note: The specific settlements are set forth in Section 79734 and blanket funding of unspecified settlements is not in the public interest.

Page 18, line 18, Section 79732(n)

Add the following: “Funds provided by this chapter shall not be expended for 1) the mitigation of any of the impacts of the State Water Project or Central Valley Project, or 2) the cost of compliance of such projects with any regulatory requirements, including without limitation biological opinions, take permits, reasonable and prudent actions, and water quality standards, or 3) the cost to carry out the affirmative obligations of the projects to preserve and restore fish and wildlife, including without limitation achieving the CVPIA restoration of anadromous fish to ensure a sustainable natural production at levels not less than twice the average levels attained during the period of 1967-1991, or 4) the costs to ensure a San Joaquin Valley drainage solution, or 5) any costs related to the Bay Delta Conservation Plan (BDCP).”

Page 27, line 1, Section 79750(a)(1)

Change “Four hundred million dollars (\$400,000,000)” to “Eight hundred million dollars (\$800,000,000)”.

Note: Due to the vast amount of habitat already in place and anticipated from private projects, including the Delta Wetlands Project, there is less need for investment in ecosystem than there is for maintaining and improving levees which are essential to protection of local habitat, agriculture, recreation, water quality and the export of water from the Delta.

Page 27, line 4, Section 79750(a)(2)

Change “Six hundred million dollars (\$600,000,000)” to “Two hundred million dollars (\$200,000,000)”.

As discussed above, we submit that there is limited justification for conversion of agricultural lands to create additional habitat in the Delta. Moreover, the SWP and the CVP are already required to create significant acreages of habitat under the Biological Opinions, including 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh to benefit longfin smelt. These Biological Opinions were recently upheld by the Ninth Circuit Court of Appeals, and the SWP/CVP are already moving forward with those projects. (See Exhibit I, showing map of planned habitat restoration projects already underway to meet the requirements of the Biological Opinion.)

Page 27, line 6, Section 79750(a)(2)

Add “and the Delta Protection Commission’s Delta Investment Fund established under Public Resources Code, section 29778.5 . . .”

The Delta Investment Fund, established in 2009 and administered by the Delta Protection Commission is the vehicle to promote the sustainability of the Delta. (See Exhibit J, What is the Delta Investment Fund?) Without such funding, proposed section 79751, subdivision (c), cannot be adequately carried out.

Page 27, lines 7-9, Section 79750(a)(3)

Delete the entirety of (3).

Note: Specific allocation is necessary to avoid circumvention of the purpose and need. The levee programs require a net gain in habitat although such is incidental to the primary purpose of levee maintenance and improvement. The mix of the two objectives in the Delta is not cost effective.

Page 27, line 13, Section 79750(b)

Add “The funding restrictions in Section 79712 shall apply”.

Page 27 after line 34, Section 79754

Add “(d) In the Delta as defined in 12220 the implementation of this section shall to the maximum extent possible seek to achieve the objectives through projects located in the channels, on the channel islands, on the former islands and areas which were in a flooded condition as of January 1, 2014, on lands owned in fee as of January 1, 2014 by State and Federal agencies, for habitat on those lands in public or nonprofit ownership for conservation purposes as of January 1, 2014, and for operation, maintenance and improvement of facilities at Brannan Andrus State Park and other existing state and local parks, for operation, maintenance and improvement of existing public and commercial boat launching, docking and service facilities, for improvements, policing and refuse clean-up of public access locations along existing public roadways and for the improvement and addition of camping areas as a part of existing public and commercial marinas. Project funding shall include grants to public agencies sufficient to establish annuities or endowments to pay all future property taxes, local agency and local district assessments, fees and charges and other levies against the property had the property remained in private ownership. Title to lands and easements shall to the maximum extent possible remain with the landowner and/or a local agency with property management capability. Projects that propagate or include endangered or threatened species shall include adequate buffers and safe harbor or other protective measures to avoid interference with agricultural operations on both the subject land and neighboring lands. Adequate funding for such measures and for acquiring, managing and monitoring shall be included in the grant. Projects outside the scope of the above listing shall be limited to the funding of projects approved in advance by the Board of Supervisors of the county or counties in which the project is located.”

Page 27, line 39, Section 79755(a)

Replace “for any of the following” with “as follows”.

Page 28, line 1, Section 79755(a)(1)

Before “Local” insert the following: “Of the funds provided by this section, not less than two hundred million dollars (\$200,000,000) shall be committed to fund”.

Page 28, line 3, Section 79755(a)(1)

Add “The commitment of funding and program shall extend for a period of years until the funding is exhausted.”

Page 28, line 4, Section 79755(a)(2)

Before “Special” insert the following: “Of the funds provided by this section, not less than four hundred million dollars (\$400,000,000) shall be committed to fund”.

Page 28, line 6, Section 79755(a)(2)

Add “The commitment of funding and program shall extend for a period of years until the funding is exhausted.”

Page 28 after line 13, Section 79755

Add new section (c) as follows: "Funding for levee projects in the Delta as defined in 12220 shall seek to achieve a base level of protection for all levee systems at least equivalent to the PL 84-99 USACE standard for agricultural levees and for those levee systems most critical to protect infrastructure, water quality or water delivery a higher level of protection as deemed appropriate by the Department of Water Resources."

Page 30 after line 21, Section 79765

Add the following: "(c) Funds provided by this chapter shall not be expended for 1) the mitigation of any of the impacts of the State Water Project or Central Valley Project, or 2) the cost of compliance of such projects with any regulatory requirements, including without limitation biological opinions, take permits, reasonable and prudent actions, and water quality standards, or 3) the cost to carry out the affirmative obligations of the projects to preserve and restore fish and wildlife, including without limitation achieving the CVPIA restoration of anadromous fish to ensure a sustainable natural production at levels not less than twice the average levels attained during the period of 1967-1991, or 4) the costs to ensure a San Joaquin Valley drainage solution, or 5) any costs related to the Bay Delta Conservation Plan (BDGP)."

* * *

Thank you for considering these comments. Please contact the undersigned to discuss any of the suggestions in this letter.

Yours very truly,



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Enclosures

cc: Senator Lois Wolk
Jim Metropolis

Exhibit A

Chapter 8

Implementation Costs and Funding Sources

Contents

Chapter 8 Implementation Costs and Funding Sources	8-1
8.1 Introduction.....	8-1
8.2 Cost Estimate.....	8-2
8.2.1 Scope and Purpose of the Cost Analysis.....	8-2
8.2.2 Common Assumptions for Cost Estimation.....	8-3
8.2.2.1 Cost Periods	8-3
8.2.2.2 Cost Contingency	8-4
8.2.2.3 Financial Assumptions.....	8-4
8.2.2.4 Delta Real Estate Values and Acquisition.....	8-5
8.2.2.5 Staff Salary Costs and Benefits Multiplier.....	8-10
8.2.3 Conservation Measure Costs.....	8-10
8.2.3.1 CM1 Water Facilities and Operation.....	8-10
8.2.3.2 CM2 Yolo Bypass Fisheries Enhancement.....	8-14
8.2.3.3 CM3 Natural Communities Protection and Restoration.....	8-17
8.2.3.4 CM4 Tidal Natural Communities Restoration	8-20
8.2.3.5 CM5 Seasonally Inundated Floodplain Restoration.....	8-23
8.2.3.6 CM6 Channel Margin Enhancement.....	8-25
8.2.3.7 CM7 Riparian Natural Community Restoration	8-26
8.2.3.8 CM8 Grassland Natural Community Restoration.....	8-28
8.2.3.9 CM9 Vernal Pool and Alkali Seasonal Wetland Complex Restoration	8-30
8.2.3.10 CM10 Nontidal Marsh Restoration.....	8-31
8.2.3.11 CM11 Natural Communities Enhancement and Management.....	8-32
8.2.3.12 CM12 Methylmercury Management	8-35
8.2.3.13 CM13 Invasive Aquatic Vegetation Control	8-37
8.2.3.14 CM14 Stockton Deep Water Ship Channel Dissolved Oxygen Levels	8-38
8.2.3.15 CM15 Localized Reduction of Predatory Fishes	8-40
8.2.3.16 CM16 Nonphysical Fish Barriers	8-41
8.2.3.17 CM17 Illegal Harvest Reduction.....	8-43
8.2.3.18 CM18 Conservation Hatcheries	8-44
8.2.3.19 CM19 Urban Stormwater Treatment.....	8-46
8.2.3.20 CM20 Recreational Users Invasive Species Program.....	8-46
8.2.3.21 CM21 Nonproject Diversions	8-48
8.2.3.22 CM22 Avoidance and Minimization Measures	8-50
8.2.3.23 Property Tax and Assessment Revenue Replacement.....	8-51
8.2.4 Plan Administration Costs	8-52
8.2.5 Monitoring and Research Action Costs	8-54
8.2.6 Changed Circumstances Costs.....	8-57
8.2.7 Summary of Estimated Costs.....	8-61

1 Table 8-35. Present Value of Capital Outlays by Plan Implementation Phase and Element

BDCP Plan Implementation Elements	Average Annual Expenditure by Plan Implementation Period (Millions) ^a			50-Year Permit Term Total Expenditure (Millions) ^a
	Near Term (Yrs 1-10)	Early Long-Term (Yrs 11-15)	Late Long-Term (Yrs 16-50)	
Water conveyance facilities (CM1)	\$1,225.8	\$0.0	\$0.0	\$12,258.0
Natural communities restoration and protection (CM2-CM11)	\$125.1	\$67.0	\$28.2	\$2,571.7
Other stressors (CM12-CM22)	\$12.8	\$16.7	\$7.4	\$471.2
Changed circumstances	\$0.7	\$1.2	\$1.7	\$72.4
Present Value of Capital Outlays	\$1,364.4	\$84.9	\$37.3	\$15,373.4
Notes:				
^a Discounted to present value with 3% real discount rate.				
The 50-year total expenditures are more precise than the annual averages and may not sum directly from the annual averages due to rounding error.				

2

3 Table 8-36. Present Value of O&M Outlays by Plan Implementation Phase and Element

BDCP Plan Implementation Elements	Average Annual Expenditure by Plan Implementation Period (Millions) ^a			50-Year Permit Term Total Expenditure (Millions) ^a
	Near Term (Yrs 1-10)	Early Long-Term (Yrs 11-15)	Late Long-Term (Yrs 16-50)	
Water conveyance facilities (CM1)	\$0.0	\$17.1	\$14.6	\$595.2
Natural communities restoration and protection (CM2-CM11)	\$1.0	\$2.0	\$2.2	\$96.3
Other stressors (CM12-CM22)	\$25.9	\$26.5	\$14.0	\$882.0
Local government revenue replacement	\$1.4	\$2.1	\$2.1	\$96.2
Monitoring and research measures	\$14.6	\$13.9	\$7.2	\$466.0
Plan administration	\$5.7	\$5.2	\$2.7	\$177.0
Present Value of Operating Outlays	\$48.5	\$66.7	\$42.7	\$2,312.8
Notes:				
^a Discounted to present value with 3% real discount rate.				
The 50-year total expenditures are more precise than the annual averages and may not sum directly from the annual averages due to rounding error.				

4

8.3 Funding Sources

8.3.1 Scope and Purpose of Funding Sources

This section identifies the potential sources that may be available to support the funding of the implementation actions identified in the previous sections. Consistent with the goals of the NCCPA and ESA, the BDCP has been designed to mitigate for the effects of the activities proposed in this Plan, provide for the conservation and management of threatened and endangered species in the Plan Area, help prevent species from becoming threatened or endangered, and improve ecosystem health. To achieve these important goals, the Plan will be funded by the Authorized Entities, which will include funding from public sources, through state and federal agencies, and other public funding sources. Funding will be provided by the participating state and federal water contractors for construction and operation of the new water facilities, as well as for mitigation necessary to address impacts to terrestrial and aquatic impacts associated with construction and operation. Funding from a variety of state and federal sources will be available for the actions in the conservation strategy. Initial state funding will largely come from a new water bond currently on the 2014 statewide ballot. Certain federal funding is expected to come from the same authorities that have been used in the past to support Delta restoration efforts. However, it is anticipated that additional federal legislation will be required to authorize the continued use of certain federal funds and to extend or broaden fund availability. Such legislation could also provide for new federal funding sources.

Every effort has been made to identify potential funding sources and make reasonable assumptions about the applicability of those funding sources to the BDCP so that all expected costs have been addressed. For instance, many of the state and federal funding sources have specific authorities that dictate the programs, projects, and in some cases geographic locations in which funds are allocated. Every effort has been made to assess these authorities and their applicability to the BDCP. Additionally, some funding sources have cost-sharing requirements; this chapter assumes that matching funds will be available. Cost-sharing requirements have been taken into account in the development of potential funding estimations. As referenced above, additional funding sources that have not been identified in this section may become available during the 50-year life of the BDCP.

It is important to note that this chapter is not a financing plan for the state or federal water contractors or any other party. Separate financing plans, funding agreements, legislative authority, and other documents will be needed to enable the use of certain funding sources. This chapter provides an overview of potential funding sources to support the implementation of the BDCP as well as the level of past financial support at the state and federal level for similar Delta activities.

8.3.2 Summary of Funding Sources

Table 8-37 provides a summary of all potential funding sources for the BDCP by entity, source, and Plan component. Each of these funding sources is described below, along with assumptions regarding applicability to the conservation measures (Table 8-38,

Table 8-39, and Table 8-40). Some funding sources are highly specific in the types of projects or activities that they fund, while others are more broadly defined. These limitations are important determinants of overall funding adequacy. Furthermore, some funding sources have a relatively short expected lifespan, while others may provide funding through the 50-year permit term.

1. Table 8-37. Summary of Estimated Funding by Entity, Sources, and Plan Component^a

Potential Funding Source ^b	Estimated Funding by Plan Component (in millions \$) ^c						Total	%
	Program Administration	Monitoring, Research, Adaptive Management, and Remedial Measures	Water Facilities and Operation (CM1)	Natural Community Protection and Management (CM3, CM11) ^d	Natural Community Restoration (CM2, CM4-CM10, CM12, CM22)	Other Stressors Conservation (CM13-CM21)		
Participating State and Federal Water Contractors	\$31	\$113	\$16,027	\$246	\$269	\$234	\$16,930	66.4%
State Funding Sources								
New Water Bond (2014)	-	-	-	\$194	\$900	\$430	\$1,514	6.1%
Second Water Bond	-	-	-	\$205	\$1,200	\$940	\$2,345	9.1%
Proposition 1E	-	-	-	-	\$100	-	\$100	0.4%
Proposition 84	-	-	-	-	\$42	\$21	\$63	0.3%
Wildlife Conservation Board	-	-	-	\$10	\$40	-	\$50	0.2%
Interagency Ecological Program (state funding)	-	\$55	-	-	-	-	\$55	0.2%
Delta Stewardship Council	-	\$90	-	-	-	-	\$90	0.4%
Ecosystem Restoration Program ^e	-	-	-	-	-	-	-	0.0%
Environmental Enhancement Funds	-	-	-	-	-	-	-	0.0%
Historic Restoration Grant Program ^f	-	-	-	-	-	-	-	0.0%
Subtotal State Funding	-	\$145	-	\$399	\$1,302	\$1,291	\$4,127	16.6%
Permitted Funding Sources								
Existing and New Federal Authorizations								
Central Valley Project Improvement Act Restoration Fund (Reclamation)	-	-	-	\$50	-	\$50	\$100	0.4%
CA Bay-Delta Restoration Appropriations (Reclamation) ^g	\$100	\$540	-	-	\$602	\$1,027	\$2,269	9.6%
CA Bay-Delta Restoration Appropriations (USFWS) ^h	\$60	\$10	-	\$96	\$96	-	\$261	1.1%
CA Bay-Delta Restoration Fund (BPA) ⁱ	-	-	-	-	\$238	-	\$238	1.0%
CA Bay-Delta Restoration Appropriations (USGS) ^j	-	\$128	-	-	-	-	\$128	0.7%
CA Bay-Delta Restoration Appropriations (NMFS) ^k	-	-	-	-	\$102	-	\$102	0.4%
CA Bay-Delta Restoration Appropriations (NMFS) ^l	-	\$15	-	-	-	-	\$15	0.1%
Regional Ecosystem Conservation (NMFS)	-	-	-	-	\$5	\$5	\$10	0.0%
Estuary Restoration Act (NMFS)	-	-	-	-	\$3	\$2	\$5	0.0%

Potential Funding Source ^b	Estimated Funding by Plan Component (in millions \$) ^a						Total	%
	Program Administration	Monitoring, Research, Adaptive Management, and Remedial Measures	Water Facilities and Operation (CM1)	Natural Community Protection and Management (CM3, CM11) ^d	Natural Community Restoration (CM2, CM4–CM10, CM12, CM22)	Other Stressors Conservation (CM13–CM21)		
Existing Federal Grants								
Wetlands Reserve Program (NRCS)	–	–	–	\$125	–	–	\$125	0.5%
Cooperative Endangered Species Conservation Fund (USFWS)	–	–	–	\$50	–	–	\$50	0.2%
Environmental Quality Incentives Program (NRCS)	–	–	–	\$50	–	–	\$50	0.2%
Land and Water Conservation Fund	–	–	–	\$25	–	–	\$25	0.1%
National Coastal Wetlands conservation grants (USFWS)	–	–	–	–	\$5	–	\$5	0.0%
Restoration Partnership Grants (NMFS)	–	–	–	–	\$7	\$3	\$10	0.0%
San Francisco Bay Area Water Quality Improvement Fund (EPA)	–	–	–	–	\$5	–	\$5	0.0%
Subtotal Federal Funding	\$160	\$840	–	\$396	\$1,062	\$1,087	\$3,545	14.3%
Other Funding Sources								
Interest income	\$145	–	–	–	–	–	\$145	0.7%
Summary						\$20	\$165	0.7%
Total Funding	\$336	\$1,098	\$16,027	\$1,061	\$3,613	\$2,623	\$24,758	100.0%
Total Costs	\$336	\$1,097	\$16,027	\$1,061	\$3,610	\$2,623	\$24,754	–
Difference (funding minus cost)	\$0	\$1	\$0	\$0	\$3	\$0	\$4	0.0%
Notes:								
^a In most cases, funding amounts are estimates only based on funding history, overlap with BDCP goals, and assessment of competitiveness of BDCP projects. Where a range is provided in the text, the midpoint of the range is used for this table unless otherwise described. Funding estimates from state and federal agencies do not represent commitments and are subject to grant awards, annual appropriations from Congress, and passage of water bonds by the voters of California. Totals may not sum directly from components due to rounding error.								
^b See text for explanation of funding source, including legal citations for federal and state funding.								
^c See text for rationale of funding estimate. Where funding sources apply to multiple Plan components, funding is allocated proportional to cost across applicable components, unless there is a basis to allocate funds differently. Allocations are estimates of potential funding and do not imply dedicated or guaranteed funding.								
^d Includes property tax revenue replacement for land acquired in fee title from private parties.								
^e Funding may be provided from this source but it is not assumed due to the uncertainty in funding to support the BDCP.								
^f See Table 8-55, <i>Potential Funding from California Bay-Delta Restoration Appropriations, by Federal Agency and Plan Component</i> , for details on funding.								
^g Excludes EIR/EIS mitigation costs.								

1 Table 8-33. Potential Funding Source by Conservation Measure—Water Facilities and Operation, Yolo Bypass Enhancement, and Avoidance Measures

Potential Funding Sources ^a	CM1: Water Facilities and Operation	CM2: Yolo Bypass Fisheries Enhancement	CM22: Avoidance and Minimization Measures ^b
Authorized Entity Funding			
DWR—revenue bonds	X		X
State water contractors	X		X
Central Valley Project Improvement Act Restoration Fund (Reclamation)	X ^c		X
California Bay-Delta Restoration appropriations—water and related resources		X	
Federal water contractors	X		X
Other State Funding Sources			
Ecosystem Restoration Program (CDFW)			X
New Water Bonds			X
Proposition 1E			X
Proposition 84			X
Other Federal Funding Sources			
California Bay-Delta Restoration appropriations (all federal agencies ^d)		X	X
Estuary Restoration Act (NMFS)		X	
Restoration partnership grants (NMFS)		X	
Investigations, energy, and water development appropriations (USACE)	X	X	X
Other Funding Sources			
Interest income	X	X	X
Notes:	X		
^a See text for rationale of funding availability. This table notes potential funding sources and does not imply dedicated or guaranteed funding. ^b Avoidance and minimization measures are applied to many conservation measures (including restoration) to avoid and minimize effects on the covered species. These measures would be incorporated into most of the projects conducted under other conservation measures, so would be funded by a wide range of sources. ^c Applicable for refuge water provided by Reclamation (not facility construction). ^d All federal agencies includes appropriations to Reclamation, USACE, NRCS, NMFS, USGS, USFWS, and EPA. DWR = California Department of Water Resources; CDFW = California Department of Fish and Wildlife; NMFS = National Marine Fisheries Service; USFWS = U.S. Fish and Wildlife Service; USACE = U.S. Army Corps of Engineers; Reclamation = Bureau of Reclamation; NRCS = Natural Resources Conservation Service; USGS = U.S. Geological Survey; EPA = U.S. Environmental Protection Agency			

2

1 Table 8-39. Potential Funding Source by Conservation Measure—Habitat Protection, Restoration, and Management

Potential Funding Sources ^a	CM3: Natural Communities Protection and Restoration	CM4: Tidal Natural Communities Restoration	CM5: Seasonally Inundated Floodplain Restoration	CM6: Channel Margin Enhancement	CM7: Riparian Natural Community Restoration	CM8: Grassland Natural Community Restoration	CM9: Vernal Pool and Alkali Seasonal Wetland Complex Restoration	CM10: Nontidal Marsh Restoration	CM11: Natural Communities Enhancement and Management	CM12: Methylmercury Management
Authorized Entity Funding										
DWR—biological opinions for long-term coordinated operations of SWP		X								X
State Funding Sources										
New Water Bonds										
Proposition 1E	X	X	X	X	X	X	X	X	X	X
Proposition 84	X	X	X	X	X	X	X	X	X	X
Wildlife Conservation Board	X	X	X	X	X	X	X	X	X	X
Federal Funding Sources										
Central Valley Project Improvement Act Restoration Fund (Reclamation)	X	X	X	X	X	X	X	X	X	X
California Bay-Delta Restoration appropriations—water and related resources				X	X	X	X	X		X
California Bay-Delta Restoration appropriations (all federal agencies)	X	X	X	X	X	X	X	X		X
Regional Ecosystem Conservation (NMFS)		X	X	X	X					X
Estuary Restoration Act (NMFS)		X	X	X	X					X
Wetlands Reserve Program (NRCS)	X	X	X	X	X	X	X	X	X	X
Cooperative Endangered Species Conservation Fund (USEWS)	X	X	X	X	X	X	X	X	X	
Environmental Quality Incentives Program (NRCS)	X	X	X	X	X	X	X	X	X	
Land and Water Conservation Fund	X	X	X	X	X	X	X	X	X	
National Coastal Wetlands Conservation Grants (USFWS)	X	X	X	X	X			X	X	X
Restoration Partnership Grants (NMFS)		X	X	X	X			X	X	X
San Francisco Bay Area Water Quality Improvement Fund (EPA)		X	X	X	X			X		X
Other Funding Sources										
Interest Income	X	X	X	X	X	X	X	X	X	X
Endowment (post permit)										
Notes:										
^a See text for rationale of funding availability. This table notes potential funding sources and does not imply dedicated or guaranteed funding.										
^b All federal agencies includes appropriations to Reclamation, USACE, NRCS, NMFS, USGS, USFWS, and EPA.										
^c Applicable to land acquisition that might be needed to support restoration.										
DWR = California Department of Water Resources; CDFW = California Department of Fish and Wildlife; USFWS = U.S. Fish and Wildlife Service; NMFS = National Marine Fisheries Service; NRCS = Natural Resources Conservation Service; USGS = U.S. Geological Survey; EPA = U.S. Environmental Protection Agency										

2

1 Table 2-40. Potential Funding Source by Conservation Measure—Other Aquatic Stressors

Potential Funding Sources ^a	CM13: Invasive Aquatic Vegetation Control	CM14: Stockton Deep Water Ship Channel Dissolved Oxygen Levels ^c	CM15: Localized Reduction of Predatory Fishes	CM16: Nonphysical Fish Barriers	CM17: Illegal Harvest Reduction	CM18: Conservation Harsheries	CM19: Urban Stormwater Treatment	CM20: Recreational Users Invasive Species Program	CM21: Nonproject Diversion
Authorized Entity Funding									
Central Valley Project Improvement Act Restoration Fund (Reclamation)	X		X					X	X
CA Bay-Delta Restoration appropriations—water and related resources	X		X		X				
State Funding Sources									
New Water Bonds	X	X	X	X	X	X	X	X	X
Proposition 1E									
Proposition 84	X	X					X		
Federal Funding Sources									
CA Bay-Delta Restoration appropriations (all federal agencies)	X	X	X	X	X	X	X	X	X
Regional Ecosystem Conservation (NMFS)	X		X	X					X
Estuary Restoration Act (NMFS)	X		X	X					X
Restoration Partnership Grants (NMFS)			X	X					X
Other Funding Sources									
Interagency	X	X	X	X	X	X	X	X	X
Notes: ^a See text for rationale of funding availability. This table identifies potential funding sources and does not imply dedicated or guaranteed funding. ^b All federal agencies includes appropriations to Reclamation, USACE, NRCS, NMFS, USGS, USFWS, and EPA. ^c Funding for the operation and maintenance of the Stockton Deep Water Ship Channel Aeration Facility is being provided through 2013 under a 3-year joint agreement with the Port of Stockton, San Joaquin River Group Authority, the San Luis and Delta Mendota Water Authority, the San Joaquin Valley Drainage Authority, and DWR. This funding agreement has two option years (2014 and 2015) that may be exercised. Because of the limited term of this funding source, it is not included as part of the long-term funding strategy. CDFW = California Department of Fish and Wildlife; NMFS = National Marine Fisheries Service; USACE = U.S. Army Corps of Engineers; NRCS = Natural Resources Conservation Service; USGS = U.S. Geological Survey; USFWS = U.S. Fish and Wildlife Service; EPA = U.S. Environmental Protection Agency									

8.3.4.1.3 Supplemental Adaptive Management Fund

The BDCP provides for the creation of a Supplemental Adaptive Management Fund, as described in Chapter 3, Section 3.4.23, *Supplemental Adaptive Management Fund*. This fund, which will be at least \$450 million, will be used to support adaptive management changes to CM1, as well as to any other conservation measure, determined to be necessary during Plan implementation. Funding for the Supplemental Adaptive Management Fund will be jointly provided by the Authorized Entities, the State of California, and the United States. The components of the fund and the process by which it would be made available to support changes to conservation measures through the adaptive management process are described in Chapter 3, Section 3.4.23, *Resources to Support Adaptive Management*.

8.3.4.2 Financing through Bonds

The state and federal water contractors could issue either general obligation or revenue bonds⁵⁶ to finance the costs of *CM1 Water Facilities and Operation*. State and federal water contractors are more likely to issue revenue bonds to finance their contribution to the BDCP because they can issue them on their own rather than general obligation bonds that require voter approval. Additionally, revenue bonds may be a preferable financing mechanism because they do not count towards the authorized debt limit of the issuing entity. However, revenue bonds carry a higher interest rate than a general obligation bond because they are backed only by the assets provided by project revenues.

Revenue bonds for the BDCP may be issued by a variety of sources. DWR may issue bonds for the BDCP as it does to finance the construction of other SWP facilities, which would then be repaid by participating SWP contractors. Individual water contractors may also issue their own revenue bonds or they may do so collectively through a joint powers authority, such as the State and Federal Contractors Water Agency (SFCWA). SFCWA is a Joint Powers Authority that was formed in 2009 by state water contractors and member agencies of the San Luis & Delta-Mendota Water Authority. SFCWA may be used as a funding vehicle for the BDCP, issuing revenue bonds on behalf of its membership and backstopped by the participating members (water contractors).

If SFCWA issues revenue bonds, 70% of all SFCWA directors must approve of the project. In addition, the specific bonds must be approved by 70% of the directors who represent the contractors who are participating members of the project. Given the economic benefits to water contractors, described later in this section and in Section 8.3.4.4.1, *Willingness to Provide Funding*, it is anticipated that most SWP contractors and members of the San Luis & Delta-Mendota Water Authority would participate in the issuance of necessary revenue bonds.

8.3.4.2.1 Debt Financing

One scenario under consideration to finance the BDCP costs identified for the state and federal water contractors (Section 8.3.4.1, *SWP and CVP Funding Responsibilities*) is the issuance of a series of four revenue bonds, each with a term of 40 years. The costs of CM1 would be financed with tax-exempt, long-term debt. The four series are described below and in Table 8-43.

- 1st bond series: fund first 2 years of construction.

⁵⁶ Only water contractors with property tax revenue are able to issue general obligation bonds. For example, Metropolitan Water District of Southern California issued a \$39.5 million general obligation bond in 2010. Revenue bonds are an available tool for all water contractors.

federal water contractors have not agreed on a specified allocation of costs for the BDCP. The exact allocation of these costs between SWP and CVP contractors and within each group will be determined near the time that permits are issued for the BDCP, and will take into account how BDCP benefits are realized within the project, as well as existing SWP and CVP policies and procedures.

8.3.5 State Funding Sources

8.3.5.1 New Water Bonds

In 2009, the California State Legislature passed a comprehensive water package that included four policy bills and a major water bond measure that is scheduled to be on the 2014 ballot. The measure is known as the Safe, Clean, and Reliable Drinking Water Supply Act of 2014. Funds derived from the issuance of such bonds would be used, in part, to satisfy the State's financial commitments to the BDCP.

The bond was originally slated to be on the 2010 ballot (as Proposition 18), then on the 2012 ballot, but was postponed until 2014 because of the State's unprecedented economic recession. The bond would provide \$11.14 billion for water supply reliability, surface and groundwater storage, Delta restoration, water recycling, water conservation, watershed restoration, groundwater protection and cleanup, and drought relief (Table 8-46). The Legislature is presently considering amendments to the bond act.

The BDCP is expected to secure a large portion of the funds allocated to Delta sustainability, as well as smaller portions of funds allocated to conservation and watershed protection. The water bond will support the public benefits of Plan implementation, particularly natural community restoration and other stressors conservation measures. For the purposes of the funding program and assuming the water bond passes, the BDCP is expected to receive the conservative estimate of funding in Table 8-46. Based on the lifespan of similar recent water bonds, the 2014 water bond is expected to disburse most or all of its funds within 10 years. For the purposes of this funding analysis, all of the funds relevant to the BDCP are assumed to be disbursed within a 10-year period.

1 **Table 8-46. Estimated Funding for 2014 Water Bond Relevant to the BDCP (based on 2010 allocations)**

Category Relevant to the BDCP (2010 Proposed Bond Section)	Total Funding Assumed (millions) ^a	Proportion Assumed for the BDCP ^b	Total Estimated for the BDCP (millions)
Delta Sustainability (79731)			
• Improvements in Delta cities and counties	\$750	13%	\$100
• Implement Bay Delta Conservation Plan	\$1,500	80%	\$1,200
<i>Subtotal: Delta Sustainability</i>			<i>\$1,300</i>
Conservation and Watershed Protection			
Ecosystem and watershed protection (79750)	\$1,785	6%	\$100
Coastal Conservancy (79750(a))	\$250	20%	\$50
Wildlife Conservation Board (79750(c))	\$215	14%	\$30
Farmland Conservancy and Watershed Coordinator grant programs (79750(i))	\$20	20%	\$4
Central Valley Project Improvement Act project that improves salmonid fish passage in Sacramento River (79760)	\$60	50%	\$30
<i>Subtotal: Conservation and Watershed Protection</i>			<i>\$214</i>
Total Funding Estimated for the BDCP			\$1,514
Notes:			
*Based on allocations for 2010 bond; amounts in 2014 or in a future year may be different.			
*Based on overlap of BDCP conservation measures with the purpose of the program and potential competitiveness of the BDCP with other projects in the geographic area of the program (some are local, others are statewide).			
Source: Meral pers. comm.; Senate Bill 2, 2009-10 7th Ex. Sess. (CA 2009).			

2
3 BDCP assumes passage of a second water bond to fully fund the state portion of the Plan. The total
4 BDCP funding assumed for the subsequent water bond is \$2.25 billion. The timing of any subsequent
5 bond is unknown but would likely occur by year 15 of the permit term, providing funding for
6 approximately 10 years after its passage.

7 **8.3.5.1.1 History of Water Bonds in California**

8 As shown in Table 8-47, 12 water bonds have been approved by California voters since 1960, a
9 frequency of one every 4 years, on average. Based on this history, subsequent water bonds that
10 would partially fund the BDCP are also likely to occur during the permit term.

Exhibit B

Table 4-4
Area (in Acres) of Natural Community Types in the Delta and Suisun Marsh

Natural and Agricultural Community Types	Delta	Suisun Marsh	Area of Overlap ^a	Total for Delta and Suisun Marsh ^{b,c}
Tidal open water	53,150	25,720	1,100	80,750
Tidal brackish marsh	350	6,330	350	8,030
Tidal freshwater marsh	6,880	-	-	6,880
Nontidal open water	10,520	30	-	10,550
Nontidal brackish marsh, managed	2,540	40,400	1,000	50,180
Nontidal freshwater marsh, unmanaged	3,280	10	10	3,300
Nontidal freshwater marsh, managed	14,300	-	-	14,300
Alkali seasonal wetlands	5,470	170	100	5,530
Grasslands with vernal pools	8,930	1,150	10	10,080
Riparian forest	8,030	-	-	8,030
Riparian scrub	7,030	170	20	7,180
Riparian invasives	170	-	-	170
Grassland	53,480	18,310	500	89,290
Inland dune scrub	20	-	-	20
*Agricultural lands				
Alfalfa	82,410	-	-	82,410
Irrigated pasture	51,890	-	-	51,890
Corn	108,220	-	-	108,220
Rice	3,750	-	-	3,750
Vineyard	28,850	-	-	28,850
Orchard	17,050	-	-	17,050
Other cultivated crops	114,540	-	-	114,540
Other agriculture	89,750	2,540	120	72,480
Oak woodland	-	460	-	460
Developed	80,110	1,890	100	81,910
Undefined	-	20	-	20
Total^d	736,902	106,330	4,920	838,230

Note: Numbers have been rounded to the nearest 10 acres.

^a The Delta and Suisun Marsh areas overlap. The acreage shown represents the extent of overlapping acreage for each natural and agricultural community type.

^b The total represents the combined acreage of the Delta and Suisun Marsh areas. The overlapping acreage is counted only once.

^c The total may not equal the sum of the acreages for individual types because of rounding.

DELTA 178,190 Acres

MARSH 101,380 Acres

Exhibit C

Title **THE CALIFORNIA WATER RESOURCES DEVELOPMENT BOND ACT**
Year/Election 1960 general

Proposition bond (leg)
type

Popular vote Yes: 3,008,328 (51.5%); No: 2,834,384 (48.5%)

Pass/Fail Pass

Summary This act provides for a bond issue of one billion, seven hundred fifty million dollars (\$1,750,000,000) to be used by the Department of Water Resources for the development of the water resources of the State.

For Argument in Favor of California Water Resources Development Bond Act

Your vote on this measure will decide whether California will continue to prosper.

This Act, if approved, will launch the statewide water development program which will meet present and future demands of all areas of California. The program will not be a burden on the taxpayer; no new state taxes are involved; the bonds are repaid from project revenues, through the sale of water and power. In other words, it will pay for itself. The bonds will be used over a period of many years and will involve an approximate annual expenditure averaging only \$75 million, as compared, for example with \$600 million a year we spend on highways.

Existing facilities for furnishing water for California's needs will soon be exhausted because of our rapid population growth and industrial and agricultural expansion. We now face a further critical loss in the Colorado River supply. Without the projects made possible by this Act, we face a major water crisis. We can stand no more delay.

If we fail to act now to provide new sources of water, land development in the great San Joaquin Valley will slow to a halt by 1965 and the return of cultivated areas to wasteland will begin. In southern California, the existing sources of water which have nourished its tremendous expansion will reach capacity by 1970 and further development must wholly cease. In northern California desperately needed flood control and water supplies for many local areas will be denied.

This Act will assure construction funds for new water development facilities to meet California's requirements now and in the future. No area will be deprived of water to meet the needs of another. Nor will any area be asked to pay for water delivered to another.

To meet questions which concerned southern California, the bonds will finance completion of all facilities needed, as described in the Act. Contracts for delivery of water may not be altered by the Legislature. The tap will be open, and no amount of political maneuvering can shut it off.

Under this Act the water rights of northern California will remain securely protected. In addition, sufficient money is provided for construction of local projects to meet the pressing needs for flood control, recreation and water deliveries in the north.

A much needed drainage system and water supply will be provided in the San Joaquin Valley

Construction here authorized will provide thousands of jobs. And the program will nourish tremendous industrial and farm and urban expansion which will develop an ever-growing source of employment and economic prosperity for Californians.

Our Legislature has appropriated millions of dollars for work in preparation, and construction is now underway. It would be tragic if this impressive start toward solution of our water problems were now abandoned.

If we fail to act now to insure completion of this constructive program, serious existing water shortages will only get worse. The success of our State is at stake. Vote "Yes" for water for people, for progress, for prosperity!

Exhibit D

In addition to the Senate Committee Report, the contracting principles, and the MWD contract, there were political press releases,³ an analysis by the League of Women Voters,⁴ and reports by outside consultants⁵ which all indicated that contract payments would pay for the cost of the entire Project, and that local property taxes, in addition to user charges, were available if revenues from water sales were not enough to pay such cost.

Alan Cramson, then State Controller, noted in a press release: "As additional security for the bonds, and to prevent a drain on the General Fund in case of deficiency, the local contracting agencies will have ad valorem taxing power over and above the cost of water which the user will pay. [1] Local agencies will therefore be able to meet their commitments to the State even if revenues from local sales of water are not sufficient for this purpose. [2] Through this procedure, the beneficiaries of the Water Plan become the financial keystones and support rather than the General Fund and the general taxpayer."

Governor Pat Brown's press comments at the time are also informative:

"Governor, what is your answer to people who say, 'I don't want to pay for somebody else's water.' Like San Franciscans. 'I have already paid for one water project. Why should I be compelled to buy another?'"

"Governor Brown: Well, they won't. The plan itself is completely self-supporting. The law provides that the contractors have to provide for the repayment of the cost of the water project. That's the full answer to it." (Italics added.)

"The League of Women Voters' analysis observed: 'The state will contract with public agencies having the assessment power so they can meet the required payment to the state by the use of taxes as well as water rates if they so desire. In this way no area will be subsidizing water for another region.'"

"As the report of Chas. T. Main, Inc., consultant to the Department of Water Resources, said: 'Rates for water and power and for other reimbursable items [i.e., charges to the local agencies] will be established so as to return to the State all costs of project operation, maintenance and replacement, all principal and interest on (1) bonds, (2) expenditures from the California Water Fund, and (3) other monies used in the construction of the project works. Since the water delivery contracts are proposed to extend as long as the bond repayment period, we consider that in order to fulfill the above requirement revenues must be developed during this period sufficient to return all such costs.' (Final Report, "General Evaluation of the Proposed Program for Financing and Constructing the State Water Resources Development System of the State of California Department of Water Resources." (Oct. 1960) p. 2.)

Dillon Reed & Co., Inc., a second outside consultant on the "financial aspects of the State's water program," reported in October before the statewide vote: "The Program contemplates that the contractors for the water to be delivered by the Program will be municipal corporations, water districts and similar public agencies with local taxing power, and that, as suggested by the Department, at least part or all of the aqueduct charge may be recovered by these contractors through the levy of taxes or assessments on real estate within their respective jurisdictions." (Report of Financial Consultants to State of California Water Resources, "Financial Aspects of Program for State Water Resources Development System." (Oct. 26, 1960) p. 24.)

"An outside consulting firm engaged to review the financial feasibility of the State Water Project examined each service area's capacity to pay and concluded that virtually all contracting areas would have to rely in part upon taxes to pay the full costs of the Project. In some areas, the consultant even projected the amount of local taxes which would be required. For example, the report estimated a need in 1980 for tax rates of 15 cents per \$100 of assessed valuation in Kern County, 21 cents in the Antelope-Modjave Valley, 33 cents in the Coachella Valley and Palm Springs area, and 18 cents within the Metropolitan Water District, including as a factor in its computations the cost of local facilities. (Append. to Final Report, "General Evaluation of the Proposed Program for Financing and Constructing the State Water Resources Development System of the State of California, Department of Water Resources." (Oct. 1960) pp. 81-810)

Exhibit E

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Bulletin No. 76

REPORT TO THE
CALIFORNIA STATE LEGISLATURE

ON THE

DELTA WATER FACILITIES

AS AN INTEGRAL FEATURE OF

THE STATE WATER RESOURCES DEVELOPMENT SYSTEM

EDMUND G. BROWN
Governor



December, 1960

HARVEY O. BANKS
Director

STATEMENT OF CLARIFICATION

The authors editing process is composed of several steps. The first step is the review of the original manuscript. The second step is the review of the manuscript by the authors. The third step is the review of the manuscript by the editors. The fourth step is the review of the manuscript by the publisher. The fifth step is the review of the manuscript by the printer. The sixth step is the review of the manuscript by the distributor. The seventh step is the review of the manuscript by the retailer. The eighth step is the review of the manuscript by the consumer.

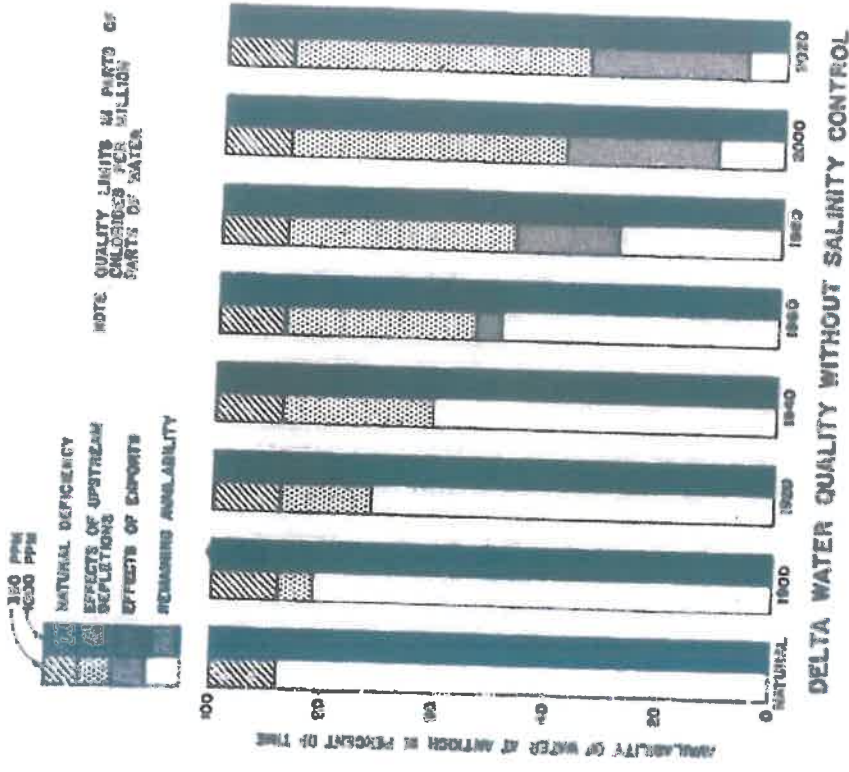
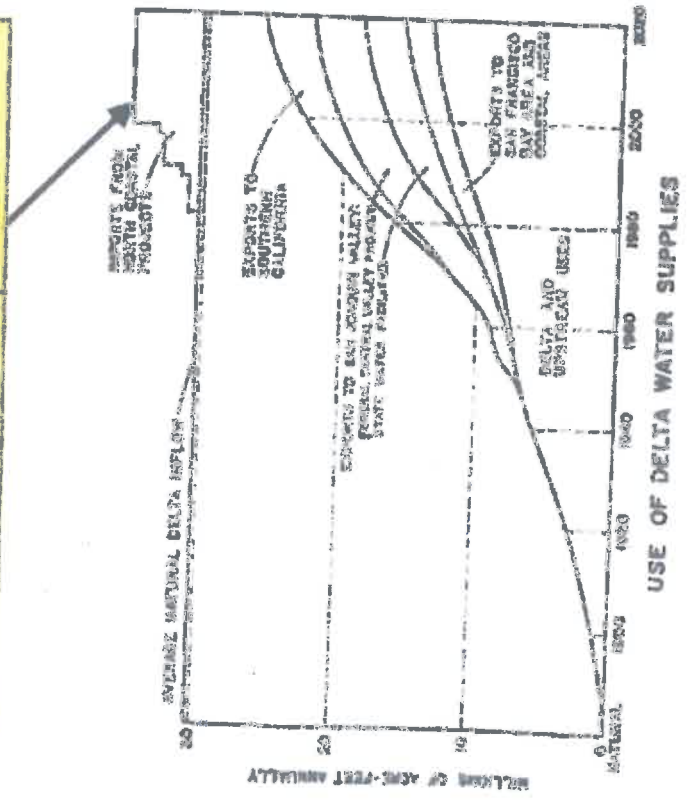
The authors editing process is composed of several steps. The first step is the review of the original manuscript. The second step is the review of the manuscript by the authors. The third step is the review of the manuscript by the editors. The fourth step is the review of the manuscript by the publisher. The fifth step is the review of the manuscript by the printer. The sixth step is the review of the manuscript by the distributor. The seventh step is the review of the manuscript by the retailer. The eighth step is the review of the manuscript by the consumer.

The authors editing process is composed of several steps. The first step is the review of the original manuscript. The second step is the review of the manuscript by the authors. The third step is the review of the manuscript by the editors. The fourth step is the review of the manuscript by the publisher. The fifth step is the review of the manuscript by the printer. The sixth step is the review of the manuscript by the distributor. The seventh step is the review of the manuscript by the retailer. The eighth step is the review of the manuscript by the consumer.

John A. Vining

The natural availability of good quality water in the Delta is directly related to the amount of surplus water which flows to the ocean. The graph to the right indicates the historic and projected availability of water in the San Joaquin River at Antioch containing less than 350 and 1,000 parts chlorides per million parts water, under long-term average runoff and *without* specific releases for salinity control. It may be noted that even under natural conditions, before any significant upstream water developments, there was a deficiency of water supplies within the specified quality limits. It is anticipated that, without salinity control releases, upstream depletions by the year 2020 will have reduced the availability of water containing less than 1,000 ppm chlorides by about 60 percent, and that exports will have caused an additional 30 percent reduction.

5 million acre ft per year
Not Developed



The magnitude of the past and anticipated future uses of water in areas tributary to the Delta, except the Tulare Lake Basin, is indicated in the diagram to the left. It may be noted that, while the present upstream use accounts for reduction of natural inflow to the Delta by almost 25 percent, upstream development during the next 60 years will deplete the inflow by an additional 20 percent. By that date about 22 percent of the natural water supply reaching the Delta will be exported to areas of deficiency by local, state, and federal projects. In addition, economical development of water supplies will necessitate importation of about 5,000,000 acre-feet of water seasonally to the Delta from north coastal streams for transfer to areas of deficiency.

Exhibit F

Exhibit G

executed. The criteria in the draft agreement were recommended by Fish and Game and endorsed by the Department, and were extensively analysed by the Board staff. Based on our most current assessment, the fishery standards provide significantly higher protection than existing basin plans. The Striped Bass Index is a measure of young bass survival through their first summer. The Striped Bass Index would be 71 under without project conditions (i.e., theoretical conditions which would exist today in the Delta and Marsh in the absence of the CVP and SWP), 63 under the existing basin plans, and about 79% under this decision.

While the standards in this decision approach without project levels of protection for striped bass, there are many other species, such as white catfish, shad and salmon, which would not be protected to this level. To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the project export pumps. The level of protection provided under this decision is nonetheless a reasonable level of protection until final determinations are made concerning a cross-Delta transfer facility or other means to mitigate project impacts.

2/ There is some indication that factors other than those considered in the Board's analysis of without project levels may also affect striped bass survival. The effects of these factors are such that the without project levels would be greater than 71. However, the magnitude of this impact is unknown and cannot be quantified at this time.

D 1485
1978



Exhibit H

**Summary Template
For
BDCP Financing Committee Action Items**

Action Item: Use of Habitat Funds to Provide Outflow

This issue may be integrated into the decision-tree if the result of the State/federal meetings is a decision tree with insufficient yield to support the project. Even if it does not become part of the decision-tree it should remain in the mix of tools that can be used through the adaptive management program. Under this idea bond funds originally targeted toward habitat restoration could be reprogrammed for capital outlay programs such as purchase of water rights, fallowing programs, development of coordinated groundwater conjunctive use programs, and other water management techniques which would provide outflow needed for fish.

Issue Leader: Brent Walthall

Summary: This financing idea was to allow public funding for habitat to be reprogrammed for use in buying water for species protection. It has the enhanced value for the species of providing more benefits than would have been provided by habitat purchases, and also serves to reduce the perceived need for flow criteria that lack sufficient scientific support (e.g. Spring, Summer, Fall X2).

The following language is included in the 2014 bond act. The Finance Committee agreed that this language is clear enough to allow funds made available under this paragraph to be used for water purchases for species protection.

"(a) One million five hundred million dollars (\$1,500,000,000) for projects to protect and enhance the sustainability of the Delta ecosystem, including any of the following:

(1) Projects for the development and implementation of the Bay Delta Conservation Plan, consistent with Chapter 10 (commencing with Section 2600) of Division 3 of the Fish and Game Code. The projects shall be implemented through a cooperative effort among regulatory agencies, regulated and potentially regulated entities, and affected parties, including state and federal water contractors. These funds may be expended for the preparation of environmental documentation and environmental compliance.

(2) Other projects to protect and restore native fish and wildlife dependent on the Delta ecosystem, including the acquisition of water rights and the removal or reduction of undesirable invasive species."

Next Steps:

1. This financing idea requires the passage of the 2014 water bond

2. Prior to passage of the 2014 water bond the BDCP and the DNCCP should be written to specifically allow for water purchases to be substituted for habitat purchases if the BDCP adaptive management plan indicates that is ecologically preferable.
3. The BDCP costs chapters should be written to acknowledge the potential use of bond funding for habitat or water purchases.

See Attachment below

Water for Habitat

As part of the BUCP conservation measures, 50,000 acres of aquatic habitat will be developed in the next 15 years. The benefits of this habitat development for pelagic species like Delta and Longfin Smelt will be determined through careful monitoring and research.

If aquatic habitat development does not make sufficient progress in achieving the BUCP biological goals and objectives, funds that are projected to be used for additional development of aquatic habitat may be used for other actions that would be a surrogate for habitat. For example, if additional seasonal outflow is needed, the funds could be used for acquisition of water for outflow. Outflow (maintenance of salinity at various locations through release of water from upstream reservoirs) may be another way to achieve biological goals and objectives, subject to scientific analysis to be conducted in the upcoming years. The funds may also be used for other conservation purposes which could reduce diversions to achieve the goals and objectives.

The costs of developing the 50,000 acres of aquatic habitat will be covered in part by future bond funds, and in part by funds provided by water agencies pursuant to CVP obligations. If no additional tidal marsh habitats are developed after the start of operation of CMA, around \$3 billion would still be available to develop water for outflow purposes from future bond funds.

The amount of water that may be needed for additional outflow has not been determined, but it could be as much as 1.6 maf on an annual average basis. ICF has estimated that the actual difference on an annual average basis could be much lower, assuming that what is needed to satisfy the fishery agency outflow requirements would be about 700 taf per year (exports at a level of 5.2 maf/yr), and the original proposed project (5.9 maf/yr).

Funds could be used in a number of ways to produce an average of 700 taf of additional outflow:

Purchase Water From Upstream Entities

Water purchases, both short and long-term, are an important component of the water contractor's supplemental water programs. A key consideration for supporting a water purchase program for Delta habitat requirements will be whether those programs compete with existing or planned supplemental water transfer supplies.

Water Rights Purchase/Lease: All or a portion of the \$3.0 billion would be used to purchase water from voluntary sellers. This option would include the purchase of lands with the appropriate water rights in either the Delta or the Sacramento Valley where the water supply could be re-managed for outflow or in-Delta habitat benefits. While transfers from the Sacramento Valley would most likely create the greatest amount of water, transfers from the San Joaquin Valley would also need to be investigated. This method has the potential to interfere with long-term transfers being contemplated by SWP or CVP south of Delta contractors, which could impact the availability and pricing of supplemental water supplies needed by the water contractors to meet hydrologic or regulatory shortages. In the instance this program could impact the water contractors. Additionally, there could be negative impacts in the areas from where land and water rights are being purchased. These impacts may have to be mitigated.

Annual Transfer Markets: Market transfers include obtaining fallowing agreements, creating conjunctive use agreements, or changing the time of year for rice tailwater release. These are generally considered annual transfers because costs are negotiated annually and are highly variable, subject to projected commodity or input values, especially in rice markets, which have traditionally supported a majority of the fallowing transfer programs. The cost of conjunctive use water has historically tracked with following prices with a slight discount and are, therefore, also subject to annual negotiations. The re-management of rice tailwater is currently being explored by the water contractors as an additional

Comment (JMA): Why not the northern San Joaquin Valley. Napa/Sacramento is already selling water, and other districts like Mendocino and the Exchange Contractors might be willing to do so.

CC: we called that to at least reference the transfers.

tool to meet hydrologic or regulatory shortages. To use bond funds, these agreements would have to be long term, even though price may have to be negotiated on an annual basis.

Following and conjunctive use transfers are tools that the SWP/CVP contractors currently use on a regular basis to meet annual water shortages. Therefore, additional competition for a limited supplemental supply (estimated at 300-500 taf per year) would impact the water contractors.

Develop New Storage

Several storage projects have been considered that include expanding existing reservoir systems or developing new off-stream storage facilities. New storage could be used to capture water during high flow periods for use later to enhance Delta outflow. Potential projects fall within two general concepts: South of Delta storage and Upstream of Delta Storage.

South of Delta Storage: Develop new or expand existing storage capability within the CVP/SWP place of use. The ability to improve the water supply associated with an isolated facility is greatly affected by the temporal delivery pattern. Expanding the capability to capture water when it is available will improve water supply. For example, analyses have been done to consider the benefits of expanded storage or unlimited demand. These analyses show that as much as 500 taf of additional water supply could be provided with additional flexibility downstream. Additional storage south of the CVP/SWP export facilities could include:

- o Expand San Luis Reservoir
- o Develop new off-stream storage south of the Delta
 - * Los Banos Grande – 1.73 to 2.04 maf (CalFed 1997)
 - * Orestimba -- 0.38 to 1.14 maf (CalFed 1997)

If the BDCP develops new storage or expands existing storage south of the Delta, such projects would no longer be available for south-of-Delta contractors to develop as part of their own water management programs. Therefore, this option is considered non-neutral to the SWP/CVP contractors because such project will compete with the exports to develop similar projects that would allow them to fully utilize wet year flow that could be captured in the Delta through a new conveyance facility and used in drier or restricted years.

Upstream of Delta Storage: Develop new or expand existing storage capability upstream of the Delta. Additional upstream storage could be used to develop a water supply during wet years to meet additional outflow requirements in other years.

- o Develop new on-stream storage upstream of the Delta
 - Example: Temperance Flat Reservoir -- 0.7 to 1.3 MAF at a construction cost of \$2.5 to \$4.0 billion.
- o Develop new off-stream storage upstream of the Delta
 - Example: Sites Reservoir -- 1.2 to 1.8 MAF at a cost of \$3.6 to \$3.9 billion. The proposed facility includes the "public benefits" objectives of ecosystem improvements in the form of supplemental flows for the Delta, water quality, and water temperature. The project estimates that roughly 600 taf of ecosystem storage will be available and roughly 200 taf of ecosystem flows will be developed annually.
- o Shasta Expansion -- 6.5 to 12.5 foot raise (256 to 634 taf storage) at a construction cost of \$0.8 to \$1.1 billion. Recent feasibility studies identified the primary planning objectives as 1) increase anadromous fish survival and 2) increase water supply reliability. The project has identified a water supply benefit of between 76 to 133 taf annually with improved cold water pool management.

New or expanded storage north of the Delta that includes dedicated storage for ecosystem benefits are considered neutral to the water contractor.

Exhibit I







PLANNED FRP AND OTHER TIDAL HABITAT RESTORATION PROJECTS FOR BIOps AND ITP COMPLIANCE

Tidal Restoration Projects*

-  **Fish Restoration Program**
-  **State and Federal Contractors Water Agency**

*Listed acreage reflects property boundaries and not amount to be created

Reference Features

-  **Yolo Bypass**
-  **Tidal Marsh**
-  **Legal Delta**
-  **Tidal Waters**
-  **Suisun Plan of Protection Boundary**
-  **County Boundary**

Lower Yolo Restoration and Enhancement
(1,480 ac of 5,400-ac site)

Prospect Island Restoration
(1,617 ac)

Overlook Club Restoration
(169 ac)

Tule Red Enhancement
(296 ac)

YOLO CO

SOLANO CO

SACRAMENTO CO

SAN JOAQUIN CO

CONTRA COSTA CO



Map prepared by WMA, December 2011

Source: State Water Board (2011) and WMA (2011)
 Delta Water Board (2011) and WMA (2011)
 State Water Board (2011) and WMA (2011)
 State Water Board (2011) and WMA (2011)

Map prepared by WMA, December 2011

Exhibit J



What is the

Delta Investment Fund?

The Delta Investment Fund was originally proposed in 2008 by the Governor's Delta Vision's Blue Ribbon Task Force. That recommendation was adopted in the Delta Reform Act of 2009, which

- established the coequal goals of water supply reliability and Delta ecosystem restoration – *"in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place"* (Water Code section 85054)
 - AND established the Delta Investment Fund, to be administered by the Delta Protection Commission (Public Resources Code, section 29778.5).
-



What does it do?

Delta Investment Fund would fund projects that advance regional economic sustainability and enhance Delta communities. The 2012 Economic Sustainability Plan for the Delta recommends the following priorities:

- Infrastructure improvements
 - Gap funding for catalytic development projects
 - Economic development assistance
 - Marketing/branding efforts
-

Where's the money?

No funds have yet been allocated to the Delta Investment Fund. It is authorized to receive funds from federal, state, local, and private sources. Various water bonds being proposed may provide an opportunity for the State to invest in capital improvements to Delta infrastructure.

How would DPC administer funds?

DPC would develop guidelines and processes for allocation of public funds in a fair and transparent manner. Stakeholders would be encouraged to participate in development of associated programs in order to focus funding on efforts that would have the maximum positive impact on Delta regional economic sustainability.

When funded, what kind of projects would be eligible?

Depending on the source of available funding, the Delta Investment Fund might support:

- Enhancement of Delta agriculture, such as local, value-added processing of Delta crops
- Recreation and tourism development, including park facilities, agri-tourism, "Gateways" for Delta visitors
- Branding and marketing efforts
- Local community economic development planning
- Grants or low-interest loans to allow private enterprise upgrades or development, such as improvements for agricultural direct-sales, or marina improvements
- Local government participation in Delta-wide regulatory process streamlining and regional economic development activities



If general obligation bond funds are available, projects would typically be "capital improvement" projects, such as:

- Educational facilities improvements
- Emergency preparedness and response facilities
- Expansion and improvement of Port facilities, as well as roads, bridges, trails, and signage
- Building improvements, including historic and recreational facilities, as well as
- Seismic & life-safety building improvements, and modernization of aging infrastructures

For more information about the Delta Protection Act, the Delta Reform Act, or the Delta Investment Fund, see the Public Resources Code section 29778.5 below, or contact DPC.



Public Resources Code, section 29778.5: The Delta Investment Fund is hereby created in the State Treasury. Any funds within the Delta Investment Fund shall be available, upon appropriation by the Legislature, to the commission for the implementation of the regional economic sustainability plan, developed pursuant to Section 29759, for the purposes of enhancing Delta communities. The Delta Investment Fund may receive funds from federal, state, local, and private sources. (Added by Stats. 2009, 7th Ex. Sess., Ch. 5, Sec. 35. Effective February 3, 2010.)

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