Appendix A
List of Interviews

This appendix lists the agency representatives and stakeholders who provided agency self-evaluation or were interviewed to prepare the *2013 Delta Vision Report Card*.

State Agencies

- Delta Stewardship Council – Chris Knopp and Keith Coolidge
- Department of Water Resources – Kamyar Guivetchi, Ajay Goyal, John Paasch, Art Hinojosa, Kent Frame, and Michael Ross
- Department of Fish and Game – Scott Cantrell, Dave Zezulak, and Hildegarde Spautz
- California Water Commission – Joe Byrne and Sue Sims
- Delta Protection Commission – Mike Machado
- Delta Conservancy – Campbell Ingram
- State Water Resources Control Board – Felicia Marcus, Les Grober, and Craig Wilson
- Central Valley Regional Board – Pamela Creedon, Tom Landau, and Jerry Bruns
- Emergency Management Agency – Jim Brown, Al Lehenbauer, and Jami Childress-Byers
- Department of Food and Agriculture – Sandra Schubert
- Delta Science Program and Interagency Ecological Program – Peter Goodwin, Lauren Hastings, Anke Mueller-Solger, and Rainer Hoenicke

Federal Agencies

- U.S. Department of the Interior – David Nawi
- U.S. Bureau of Reclamation – Sue Fry
- U.S. Fish & Wildlife Service – Dan Castleberry, Mike Chotkowski, and Mike Hoover
- National Marine Fisheries Service, Maria Rea, Jeff McLain, and Ryan Wulff
- U.S. Environmental Protection Agency – Tim Vendlinski
- U.S. Department of Agriculture, Natural Resources Conservation Service – Luana Kiger

Stakeholders and Others

- Association of California Water Agencies – Tim Quinn
- California Farm Bureau Federation – Danny Merkley
- California Farm Water Coalition – Mike Wade
- Central Delta Water Agency – Tom Zuckerman
- Defenders of Wildlife – Kim Delfino
- Delta Counties Coalition – Doug Brown
- East Bay Leadership Council – Linda Best and Bob Whitley
- East Bay Municipal Utilities District – John Coleman and Doug Wallace
- House Subcommittee on Water and Power – Dave Wegner
- Metropolitan Water District of Southern California – Jeff Kightlinger
- North Delta Water Agency – Melinda Terry
- Northern California Water Association – David Guy and Todd Manley
- Planning and Conservation League – Jonas Minton
- Sacramento Regional County Sanitation District – Stan Dean
- San Luis-Delta Mendota Water Authority – Dan Nelson
- Southern California Water Committee – Rich Atwater
- The Bay Institute – Gary Bobker
- The Nature Conservancy – Leo Winternitz
- Westlands Water District – Jason Peltier

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Individuals

- Matt Brown
- Jim Cox
- Richard Denton
- Hal Helsey
- Eric Jensen
- John Kirlin
- Michael Prezsler
- Michael Saade
- Burt Wilson

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Appendix B
Actions Status by Evaluation Topic

This appendix describes the status and progress of the 85 actions recommended in the *Delta Vision Strategic Plan*. Actions are grouped by the evaluation topics described in Section 2 of the *2012 Delta Vision Report Card*.

Near-Term Actions B-3

Governance B-16

Ecosystem Restoration and Recovery B-26

Delta Vitality and Security B-55

Water Supply Reliability B-76

Acronyms

The following are the acronyms used in this appendix.

AWMC	Agricultural Water Management Council
BDCP	Bay-Delta Conservation Plan
BFA	State Board of Food and Agriculture
BTH	California Business, Transportation, and Housing Agency
Cal EMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
Caltrans	Department of Transportation
CCWD	Contra Costa Water District
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Parks and Recreation
cfs	cubic feet per second
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
Central Valley Regional Board	Central Valley Regional Water Quality Control Board
CWC	California Water Commission
Conservancy	Sacramento-San Joaquin Delta Conservancy
CZMA	Coastal Zone Management Act
Delta	Sacramento-San Joaquin River Delta
DOC	U.S. Department of Commerce
DOI	U.S. Department of the Interior
DPC	Delta Protection Commission
DSC	Delta Stewardship Council
DSP	Delta Science Program
DVF	Delta Vision Foundation
DVSP	Delta Vision Strategic Plan
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERP	Ecosystem Restoration Program
ESA	Endangered Species Act
ESP	Economic Sustainability Plan

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FEMA	Federal Emergency Management Agency
IEP	Interagency Ecological Program
IRWM	Integrated Regional Water Management
ISB	Independent Science Board
MOU	Memorandum of Understanding
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTA	Near-term Action
OCAP	Operational Criteria and Plan
Reclamation	Bureau of Reclamation
Regional Board	Regional Water Quality Control Board
Resources	California Natural Resources Agency
SLC	State Lands Commission
State Water Board	California State Water Resources Control Board
SWP	State Water Project
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Progress Evaluation

The Delta Vision Foundation assessed the status of each action in the *DVSP* using a ten-point scale (0 to 10), as follows.

Progress and Completion		
0 points	No action	No action by Governor, Legislature, or Agency Director to initiate
1 point	Authorized	Legislative authority granted and Administrative direction and initial funding provided
2 points	Initiated	Purpose defined, work plan and schedule developed, team assembled
3 points	Planned	Planning complete, ready for implementation.
4 points	In Progress Early	Implementation begun, funding authorized, workforce mobilized
6 points	In Progress Mid	Implementation substantially underway
8 points	In Progress Late	Implementation nearing completion
10 points	Completed	Action completed, ongoing adaptive management and maintenance

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Actions Status by Evaluation Topic

Action #	Action Name	State Lead
	Action Description	Other Responsible Organizations

Evaluation Topic: 1 - Near-term Actions

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NTA01 Water Diversion Information | **State Water Board**

Obtain needed information on water diversion and use. | State Water Board, DWR

Progress Score: 4 **Enacting Legislation:** Water Code Sections 85086(a), 85230, and 5100

Status Description:

Water Rights Reporting.
The 2009 water legislation included water rights enforcement provisions (SBX7-8), which modified the reporting requirements for surface water diversions, eliminated many exemptions, and added civil and criminal penalties, which had been previously lacking. As the result of this legislation, most diverters in the Delta were required to report diversions for the first time. The law requires any diverter who diverts water after December 31, 1965 to report by July 1 their diversions from the previous year. There are some limited exceptions. Diverters are required to monitor their diversions on a monthly basis starting January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriated $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. The State Water Board has established an online water rights reporting system (see Action 7.1.5).

Electronic Reporting.
The California Code of Regulations (CCR) Title 23, Chapter 2.7, Sections 907 to 930 identifies requirements for the mandatory electronic filing of reports on the State Water Board's internet website. Reports subject to mandatory electronic filing include: supplemental statements of water diversion and use, Water Right Progress Reports by Permittees, Reports of Licensees, Notices of Groundwater Extraction and Diversion, and reports filed by watermasters.

The State Water Board maintains a computer database and online information system for water rights reporting, the Electronic Water Rights Information Management System (eWRIMS). eWRIMS contains information on water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors. The eWRIMS Report Management System provides water right holders the ability to report monthly diversion and use electronically. eWRIMS consists of both a tabular database and an integrated geographic information system (GIS). Users can search and display eWRIMS data by several criteria, including the water right owner's name, watershed, stream system, and county. DWR is developing a uniform water use reporting form and database as part of the Water Use Efficiency program. The system is expected to be in place in mid-2014.

Enforcement.
Since 2009, the State Water Board hired 20 new staff to perform water right enforcement and public trust protection activities. These resources have been focused on investigations in the North Coast Instream Flow Policy Area to address illegal reservoir diversions and in the Delta counties to achieve compliance with the self-monitoring and measurement requirements of the legislation.

Delta Watermaster.
On July 7, 2010, the State Water Board appointed Craig M. Wilson as California's first Delta Watermaster for a four-year term. The Delta Watermaster is empowered to take enforcement against unlawful diversions in the Delta and to submit reports on specified water issues. The Delta Watermaster works with Delta diverters to increase compliance with new reporting requirements. As of April 2013, 359 of the 360 (99%) of the diverters required to report have filed

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the required reports on diversion. Statements of monthly diversion and use for 2012 are due for the first time by July 1, 2013.

On September 19, 2012 Delta Watermaster, Craig Wilson, issued "Improving Water Right Enforcement Authority." The report argues that the State Water Board's weak enforcement authority for water rights is inconsistent with its broad enforcement authority over water quality matters. The Watermaster recommends that additional water right administrative and enforcement authority be provided to the State Water Board. The current process for enforcing the constitutional prohibition against the waste or unreasonable use of water is unnecessarily convoluted. He recommends that administrative civil liabilities be added for, among other things, violations of diversion reporting and monitoring requirements.

Groundwater Monitoring and Reporting.
The 2009 water legislation also included requirements for DWR to establish a groundwater elevation monitoring and reporting program by January 1, 2012 (SB7X-6). DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. As of January 1, 2013, 63 organizations have been designated groundwater monitoring entities. These entities are reporting on 146 groundwater basins or sub-basins. DWR's role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a public database, which is now available online at http://www.water.ca.gov/groundwater/casgem/online_system.cfm.

These actions by the Legislature and State Water Board make significant steps to address the DVSP recommendations regarding reporting, penalties, and additional staffing. The DVSP also noted that "the information about current diversions and use in the current water system is inadequate to the task of managing the co-equal values." The DVSP recommended development of a more robust monitoring and management system for stream flows, surface water diversions, and groundwater pumping by the State Water Board, DWR, and others. This system envisions real-time information management and decisionmaking to "provide a better foundation for changes in water diversion timing," as well as efforts to improve regional self-sufficiency. Additional information is needed to understand the progress of these recommended improvements.

See also Action 4.2.4, Diversion Data Collection, and Action 7.1.5, Water Diversion Compliance.

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NTA02 Delta Information Collection | **Delta Protection Commission**

Initiate collection of improved socio-economic, ecosystem, and physical structure data about the Delta to inform policy processes and project level decision making by all public agencies, local, state, and federal.

DWR, CDFW, DPC, DSC, State Water Board, Regional Boards, and Local Govts

Progress Score: 3 **Enacting Legislation:** Public Resources Code section 29759, Water Code Section 85086(a), Water Code 12924, Water Code Sections 13167 and 13181

Status Description:

Diversion Data. Water Code section 85086(a) instructed the State Water Board to establish an effective system of Delta watershed diversion data collection and public reporting by December 31, 2010. The State Water Board meets this requirement—it has an online reporting tool for water rights diversion reporting. (See NTA01).

Groundwater Data. Water Code section 12924 established a program for the collection of groundwater elevation data. DWR has developed the CA Statewide Groundwater Elevation Monitoring Program (CASGEM) to collect groundwater elevations and make the data available online. Monitoring Entities conducted the first round of groundwater elevation monitoring in Fall 2011, and submitted data to DWR by January 1, 2012. As of May 31, 2013 there are 67 monitoring entities covering 177 groundwater basins or subbasins. DWR has not received data for 40 of these basins. A total of 362 groundwater basins or subbasins (70%) are not being monitored. DWR completed the 2012 CASGEM Status Report on February 23, 2012, prepared for the Governor and the Legislature as required by the Water Code (§10920 et seq.). The report outlines the background of the CASGEM Program and describes the first two years of implementation.

Aquatic Species and Habitat Inventory. The IEP initiated an inventory of research and monitoring in the Delta to improve information sharing and facilitate decision-making. The IEP includes: DWR, CDFW, and the State Water Board; USFWS, Reclamation, USGS, USACE, NMFS, and USEPA; and the San Francisco Estuary Institute. The IEP agencies have compiled an inventory of studies and monitoring efforts related to IEP core and agency-directed studies. The IEP Coordinators have initiated a business process review to ensure there is an on-going process to manage, track and report all research and monitoring efforts. The IEP supported the development of the CA Water Monitoring Council's My Water Quality portal, a public facing website.

Water Quality Monitoring Council. Water Code Sections 13167 and 13181 and the MOU between CalEPA and Resources require the California Water Quality Monitoring Council (Monitoring Council) to develop recommendations to improve the coordination and cost-effectiveness of monitoring, enhance the integration of data, and increase public accessibility to data. The Monitoring Council launched a public website (My Water Quality portal) in 2010. The "2012 Progress Report And Recommendations Of The California Water Quality Monitoring Council" was submitted to Matthew Rodriquez (CalEPA) and John Laird (Resources) on May 9, 2013. In their cover letter, the Monitoring Council reminded Secretaries Rodriquez and Laird that the Council was still awaiting for their endorsement with respect to the Council's recommendations of January 13, 2012. The Secretaries endorsement of the Monitoring Council's "Comprehensive Monitoring Program Strategy for California" were crucial to resolving the State's lingering monitoring, assessment and data access issues. Without instructions to at least the eighteen departments, boards, commissions, and conservancies explicitly named in the legislation, (all but one of which reside within their two agencies), the goals of SB 1070 cannot be realized.

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Pulse of the Delta. On March 11, 2011 the Aquatic Science Center issued the first annual "Pulse of The Delta 2011: Monitoring and Managing Water Quality in the Sacramento–San Joaquin Delta." The Aquatic Science Center 2012 The Pulse of the Delta: Linking Science & Management through Regional Monitoring (2012 Pulse) was released in December 2012. Publication of The Pulse is a project of the Delta Regional Monitoring Program funded by the State Water Board and USEPA. The "Status and Trends" section of the 2012 Pulse has a trove of scientific data on Delta monitoring results. The IEP, USGS, Central Valley Regional Board, CDFW, DWR, and scientists at the UC Berkeley and SF State Romberg Tiburon Center compiled the information.

See also Action 3.5.4, Comprehensive Delta Monitoring.

Socio-economic Information. Public Resources Code section 29759 required the DPC to adopt an Economic Sustainability Plan (ESP) by July 1, 2011. The ESP compiled baseline socio-economic data for the Delta. The ESP recommended additional and ongoing data collection regarding recreation, development of an economic scorecard for the Delta, and additional engineering and economic research by the Delta Science Program. The ESP was approved by the DSC and incorporated into the Delta Plan in 2012. The next update to the ESP is due in 2016. The DPC's 2012 Annual Report (February 12, 2013) notes that the DPC will continue to monitor economic data in the Delta region.

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NTA03 In-stream Flow Analysis | **Department of Fish and Wildlife**

Accelerate completion of in-stream flow analyses for the Delta watershed by the Department of Fish and Game. CDFW, USFWS, NMFS

Progress Score: 2 **Enacting Legislation:** Water Code Section 85084.5

Status Description:

The 2009 water legislation (SBX7-1) directed CCDFW, in consultation with USFWS and NMFS, to develop and recommend to the State Water Board Sacramento-San Joaquin Rivers Delta tributaries flow criteria and quantifiable biological objectives for aquatic and terrestrial species of concern dependent on the Delta by November 2010. CCDFW completed its report "Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta" on December 3, 2010.

CCDFW is preparing the 2012 Instream Flow Program (IFP) annual report for release in June 2013. The annual report includes a general work plan for 2013. The 2011 annual report can be found on the IFP webpage at http://www.dfg.ca.gov/water/instream_flow.html.

New instream flow studies on Sacramento-San Joaquin Rivers Delta tributaries began in the fall of 2011 and will extend through 2021. Under ERP's Proposition 84 funding, CCDFW hired three permanent staff and two scientific aides to conduct SBX7-1 studies. In 2012, IFP staff obtained necessary field and data collection equipment, completed training in field data collection, equipment use, field safety, and software modeling. IFP staff has also developed a work plan and schedule for evaluating and recommending instream flow studies for the next 10years. CCDFW continues to coordinate with the State Water Board to maintain and update the Sacramento-San Joaquin River Delta tributaries priority streams list (http://www.dfg.ca.gov/water/instream_flow.html). IFP staff has completed a work plan for evaluating and implementing the Sacramento-San Joaquin Rivers Delta tributary instream flow studies through SBX7-1. The USFWS, under CCDFW contract began work in fall 2012 to complete the first Sacramento-San Joaquin Rivers Delta tributary instream flow study on lower Butte Creek by 2016. Also in 2012, the IFP completed data collection on Auburn Ravine, a tributary to the Sacramento River in Placer County, for an instream flow study initiated by CCDFW Region 2. In 2012, the IFP initiated scoping for instream flow and fish passage studies on Deer and Mill Creeks. IFP staff installed temperature loggers on Mill Creek in spring of 2013 to begin developing a temperature profile over time.

See also 3.4.1, Instream Flows.

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NTA04 Middle River Two Barrier Project | **Department of Water Resources**

Conduct a Middle River Corridor Two Barrier pilot project. | DWR, CDFW, Central Valley Regional Board, SLC, Reclamation

Progress Score: 2 **Enacting Legislation:** Water Code Sections 85085 and 85350

Status Description:

The 2009 water legislation (SBX7-1) directed CDFW to coordinate with the State Water Board, the regional water quality control boards, and the SLC and their efforts to cooperate with Reclamation to construct and implement the Two-Gates Fish Protection Demonstration Project by December 1, 2010. The legislation appropriated $28M to DWR for the project.

Work on the Two Barrier Project has been suspended due to high cost and concerns that it would not achieve the desired benefits and could have significant impacts on listed fish by increasing predator habitat and adversely affecting critical habitat. IEP is conducting turbidity studies associated with early winter outflow to assess Delta smelt movement. A report on initial field investigations is in preparation. Additional field work is planned. These studies are not assessing the effectiveness of flow control structures since none are in place or planned to be constructed.

NTA05 CCWD Alternate Intake Project | **Contra Costa Water District**

Complete construction of an alternative intake for the Contra Costa Water District. | CCWD

Progress Score: 10 **Enacting Legislation:**

Status Description:

The Alternate Intake Project is complete and was dedicated on July 20, 2010.

NTA06 Three Mile Slough Barrier | **Department of Water Resources**

Evaluate the effectiveness of a Three Mile Slough Barrier project. | DWR, Reclamation, CDFW

Progress Score: 2 **Enacting Legislation:** Water Code Section 85085(b)

Status Description:

The 2009 water legislation (SBX7-1) directed CDFW to evaluate the effectiveness of the Three Mile Slough Barrier project. This project is an alternative being evaluated as part of the Franks Tract Project. In February 2009, Reclamation published the "Initial Alternatives Investigation Report" on potential improvements in the North and Central Delta. The report recommends further investigation of the Three Mile Slough Barrier and the West False River Barrier. The Draft EIR on the projects was planned for Spring 2011, with a Record of Decision in Spring 2012, and construction beginning in Summer 2012. The project has been delayed by difficulties in developing agreement between DWR and Reclamation on modeling baselines, lack of federal budget for Reclamation participation and review, and redirection of staff to work on OCAP biological opinions. The date for the Draft EIS/EIR has been revised to April 2013 although federal funding to meet that date is uncertain.

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NTA07 Clifton Court Fish Screen Demonstration | **Department of Water Resources**

Construct a demonstration fish protection screen at Clifton Court Forebay. | DWR, CDFW

Progress Score: 2 **Enacting Legislation:**

Status Description:

In July of 2010, MWD of So Cal, CCWD, SCVWD, ACWD, and Zone 7 initiated a feasibility-level study of low-flow fish screens at Clifton Court Forebay, building upon DWR's December, 2009 Low-flow Intake Technical Analysis Report. The final report is expected soon. Preliminary results indicate that there may be both fish and water supply benefits from installing fish screens at Clifton Court that would operate only during low flow diversion periods (typically in the winter).

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NTA08 Near-term Ecosystem Restoration | **Department of Fish and Wildlife**

Advance near-term ecosystem restoration opportunities. | DWR, DC, CDFW, CVFPB

Progress Score: 3 **Enacting Legislation:** Water Code Sections 85085(c) and (d)

Status Description:

The 2009 water legislation (SBX7-1) directed CCDFW to expeditiously move ahead with the DVSP near-term actions and assist in implementing early action ecosystem restoration projects. These projects include, among others, the Dutch Slough and Meins Landing tidal marsh restorations.

In coordination with the other ERP implementing agencies (USFWS and NMFS), CCDFW is finalizing the ERP Conservation Strategy for a target release in June 2013 to help guide restoration activities in the Delta, as well as the Sacramento and San Joaquin Valleys. The ERP Conservation Strategy has identified near-term land acquisition and habitat enhancement priorities for the Delta. These projects were identified based on habitat types that fit into upland, intertidal, floodplain, and subsided/deep open water classifications and would make a contribution toward meeting the ERP Goals and Objectives. Restoration of intertidal and shallow subtidal areas continues to be a very high priority for the Delta while considering potential concerns about promoting invasive species and the methylation of mercury in sediments.

Many of the following near-term ecosystem restoration actions are included in the FRPA Implementation Strategy (see 3.1.2, Tidal Habitat Restoration). In addition, many of these projects have funding provided by ERP and are considered for early implementation under BDCP. Lead agency and FRPA status is in parentheses. For map of FRPA related projects, see
http://www.water.ca.gov/environmentalservices/docs/frpa/FRPA_and_Other_Restoration_Projects_Map_v2.pdf.

In the Cache Slough Complex:
Prospect Island Tidal Habitat Restoration (FRPA). Status: DRERIP evaluation of original 15 alternatives is complete (see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=59671)Phase 2 Hydraulic modeling of 10 restoration alternatives to aid final selection of design alternatives is underway, ongoing interim land management, levee inspections and repair plan, invasive plant species analysis report complete. Challenges: infeasible to permit a breach of the Sacramento Deep Water Ship Channel levee; need to maintain access to adjacent property following levee breach; trespassing and vandalism; legal access issues with adjoining property owners; Ryer Island levee seepage.

Liberty Island/Cache Slough Enhancement Plan (CCDFW/potential FRPA). Status: ERP funded Breach III studies at Liberty Island, final report is expected 2013. Continued fisheries monitoring through IEP. Land management plan for Liberty Island to be completed in 2014.

Lindsey Slough/Calhoun Cut Freshwater Tidal Marsh Enhancement (CCDFW/potential FRPA). Status: ERP has provided funding for implementation and anticipates providing funding for the construction planned to initiate in 2014. Feasibility evaluation complete, 100% designs completed, Mitigated Negative Declaration to be released in summer 2013. Permits to be finalized by summer of 2013. Challenges: Solano County Water Agency has concerns over increased primary production/nutrients in the system and the negative effects it would have on water quality near the Barker Slough Pumping Plant.

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Lower Yolo Ranch Aquatic Habitat Restoration (SWFCA). Status: Restoration to be done by State Water Contractors; CCDFW coordinating for project planning and permitting. Draft EIR released April 2013, Available on line at http://www.sfcwa.org/2013/04/22/drafteir-lower-yolo-ranch-tidal-restoration-project/

Dutch Slough (DWR). Dutch Slough is an area of about 1180 acres that was leveed in the 1800s for agricultural production, primarily grazing and dairy operations located in the West Delta in northeastern Contra Costa County. Status: ERP provided over $25 million in funding for the acquisition, permitting and planning phases. Phases 1 and 2, which included planning & permitting, have been completed. DWR has applied for construction funding assistance from federal and state agencies for Phase 3, and expects to begin construction in late 2013. Phase 3 includes restoration of natural habitat on two of the three parcels, Emerson (426 acres) and Gilbert (305 acres). Tasks include: raising marsh plain elevations, realigning the Marsh Creek channel to its historic position on Emerson parcel, restoring full tidal exchange to Emerson and Gilbert, and enhancing recreation access. Burroughs parcel cannot be restored without first addressing erosion and flood potential that inundation poses to a public roadway. Restoration of the Burroughs parcel would follow in a subsequent phase and require additional funding.

Little Holland Tract Management and Enhancement (CCDFW & USACE/ potential FRPA). Status: Land belongs to the USACE; CCDFW working collaboratively with USACE on management and habitat enhancement of Little Holland Tract as part of the Cache Slough Complex.

In Suisun Marsh:
Hill Slough Tidal Marsh Restoration Project (CCDFW/potential FRPA). Status: EIR and Management Plan will be released together as public draft in 2013; construction date is on hold, pending funding. ERP has provided funding for planning and permitting phase, and grant is extended an additional year to June 2014. Challenges: Retrofit of PG&E towers and raising elevation of Grizzly Island Road to accommodate tides and flooding. See: http://dfg.ca.gov/ERP/erp_proj_hill_slough.asp

Meins Landing Tidal Marsh Restoration (DWR/potential FRPA). Status: In planning & conceptual design phase. Challenge: Maintaining access for repair and maintenance of existing gas pipeline.

Rush Ranch (Solano Land Trust). Status: In planning and conceptual design. Initial Study and Mitigated Negative Declaration will begin in 2013. Developing a system-wide management plan for invasive weed species; permitting in progress. Challenge: working through difficulties of permitting tidal marsh restoration. Construction challenge: control of invasive non-native perennial pepperweed (Lepidium latifolium) and general weed management solutions that avoid impacts to listed native plants.

Tule Red Tidal Marsh Restoration (SWFCA). Status: Project description and FAST consultation in progress. Permitting will start in 2013 and construction is planned for 2014.

Overlook Club / Property 322 Tidal Marsh Restoration (DWR, FRPA). Status: In Planning and Conceptual Design. The property was purchased in February 2013 and restoration is planned for summer of 2016. Challenge: Developing a plan to control invasive Phragmites australis and prevent its re-establishment after restoration.

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Blacklock Restoration project (DWR). Restoration is complete. ERP has provided funding for implementation and post-construction monitoring for mercury. http://www.water.ca.gov/suisun/docs/Blacklock%20Restoration%20Plan_Final_062807.pdf

Other restoration projects: Fremont Weir Fish Passage Enhancement, Tule Canal Fish Passage Enhancement, Lisbon Weir Fish Passage Enhancement, and Putah Creek Restoration and Enhancement (potential FRPA). See project descriptions in 3.1.1 Floodplain Inundation

Battle Creek Salmon and Steelhead Restoration Project (DWR & CCDFW). In 1999, the Bureau of Reclamation (Reclamation) received $28 million Federal CALFED Bay-Delta Program, ERP funds for project planning and implementation. ERP transferred an additional $26,812,500 to Reclamation in 2008. Recent accomplishments for the Restoration Project included work on the fish screen and ladder construction at the Eagle Canyon and North Battle Creek Feeder diversion dams, as well as the Inskip Powerhouse penstock bypass and tailrace connector. Completed June 2012. Information available: http://www.battle-creek.net/ and http://dfg.ca.gov/ERP/erp_proj_battle_ck.asp

McCormack-Williamson Tract and Staten Island. McCormack-Williamson Tract and Staten Island are part of a long-term coordination effort with DWR. An EIR has been completed to allow the island's levees to overtop and flood the island during storm events. The project is designed to implement flood control improvements that encourage establishment of aquatic and terrestrial habitats, native species, and ecological processes. Project implementation will restore and enhance approximately 1,650 acres of various habitat types, including floodplain intertidal marsh, riparian, and scrub-shrub. ERP has awarded over $30 million to The Nature Conservancy for implementation of this project. FRPA may provide funding for this project, if agencies approve credits under OCAP for delta smelt food web support.

Delta Working Landscapes. ERP funded project. The project offers an innovative program of farm habitat improvement and environmentally friendly agriculture practices that will benefit fish and wildlife, reduce erosion and sediment runoff, and improve water quality. These pilot programs are intended to serve as a catalyst for adoption by other farmers on a larger scale throughout the Delta. Six farmers have allowed Ducks Unlimited to convert 311.5 acres of agricultural lands to seasonal managed wetlands for waterfowl use. Another six farmers allowed for native planting on 6.5 miles of irrigation ditches and landside levees to minimize erosion, sediment runoff and to improve water quality.

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NTA09 Emergency Response Materials | **Department of Water Resources**

Stockpile rock and other emergency response materials. | DWR

Progress Score: 4 **Enacting Legislation:** Water Code Section 83002.7

Status Description:

DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. To date, DWR has stockpiled 485,000 sandbags, 9.5-miles of plastic, 2,800-rolls of twine, 72,000 stakes, 250,000 buttons, 12 roll-off containers, 225,000-tons of rock.

DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Land leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

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NTA10 Emergency Response Capacity Improvement | **Emergency Management Agency**

Assess and improve state capacity to respond to catastrophic events in the Delta. | Cal EMA, DPC, BTH, CDFW, DWR

Progress Score: 2 **Enacting Legislation:** Water Code Section 85305(a)

Status Description:

The 2009 water legislation directed that the Delta Plan must attempt to reduce risks to people, property, and State interests and that the DSC may incorporate into the Delta Plan the emergency preparedness and response strategies for the Delta developed the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force (Task Force). The reports describe recommended actions to improve the State's capacity to respond to catastrophic events in the Delta. The recommendations have largely been incorporated into the Delta Plan

Emergency Resources. DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

Catastrophic Flood Incident Plan. Cal-EMA and FEMA are leading the effort to develop the Northern California Catastrophic Flood Incident Plan, which will be completed in fall 2013.

Emergency Communications Planning. DPC received a $5 million DWR grant to plan and implement improved Delta emergency communications and coordination among the five counties, state and federal response planners.

See Actions 6.1.1, Delta Emergency Response Plan, and 6.1.2, Emergency Management Actions, for further information.

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Evaluation Topic: 2 - Governance

1.1.1 Statutory Co-equal Goals | **Legislature**

Write the co-equal goals into the California Constitutionor into statute. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Public Resources Code Section 29702, Water Code Sections 85054, 85020, 85021, 85022(c), and 85023

Status Description:

Enacting legislation complete. Accurately defines the Delta Vision Strategic Plan (DVSP) objectives including The Two Co-Equal Goals and policy objectives.

Federal law now incorporates the Two Co-Equal Goals. The Delta Plan notes that the federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following: The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem…Nothing herein modifies existing requirements of Federal law. (Section 205)

1.1.2 Administrative Co-Equal Goals | **Governor**

Incorporate the co-equal goals into the mandated duties and responsibilities of all state agencies with significant involvement in the Delta. | Governor and Legislature

Progress Score: 0 **Enacting Legislation:**

Status Description:

The Governor has not directly incorporated the co-equal goals into the mandated duties and responsibilities of relevant state agencies. In his January 12, 2012 State of the State speech, Governor Brown briefly included a commitment to the Two Co-Equal Goals, referring to the Bay-Delta Conservation Plan. "Another huge issue we must tackle is water…. We know more now and are committed to the dual goals of restoring the Delta ecosystem and ensuring a reliable water supply." Since that time, the Governor presented a modified proposed project for BDCP in July 2012, but has not provided further direction committing state agencies to the Two Co-Equal Goals.

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1.1.3 Requiring Achievement of Co-Equal Goals | **Legislature**

Require the achievement or advancement of the co-equal goals in all water, environmental, and other bonds, and operational agreements and water contracts or water rights permits that directly or indirectly fund activities in the Delta.

Governor and Legislature, Resources, CalEPA

Progress Score: 1 **Enacting Legislation:** Division 26.7, Section 79700

Status Description:

The Legislature and the Governor's Administration have not taken action, beyond the passage of the 2009 water legislation, to require achievement of the Two Co-Equal Goals in bonds, operational agreements, contracts, and water rights permits. The 2013 Delta Plan establishes a long-term vision that the Two Co-Equal Goals will be the foundation of all State water management policies and no water rights decisions or water contracts that impact the Delta shall be made without consideration of the coequal goals (Delta Plan page 22). The Plan directs the State Water Board to adopt and implement updated flow objectives for the Delta to achieve the Two Co-Equal Goals of ecosystem protection and a reliable water supply by June 2, 2014.

As a direct result, in December 2012, the State Water Board released its proposed update to the current Water Quality Control Plan for the San Francisco Bay-Sacramento-San Joaquin Delta Estuary (Update). The update identifies the beneficial uses of water in the Delta, water quality objectives to protect those uses, and a program of implementation to achieve those objectives. The Update is intended to implement the Two Co-Equal Goals of ecosystem protection and a reliable water supply.

The proposed water bond (SBX7-2) funds both ecosystem restoration and water supply reliability activities. The bond measure is scheduled for the November 2014 ballot.

The 2009 water legislation (SBX7-8) appropriated $546 million of previously approved bond funds for activities in or related to the Delta: $250M for integrated regional water management, $32M for flood control, $170M to reduce risk of levee failure that would jeopardize water conveyance, $70M for stormwater flood management projects, and $24M for grants to support natural community conservation plans.

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7.1.1 Delta Stewardship Council | **Legislature**

Establish a California Delta Stewardship Council to replace the Bay-Delta Authority and take over CALFED programs. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Water Code Sections 85034(c) and 85280(c)

Status Description:

The 2009 water legislation established the DSC as an independent State agency with a proposed 2011-2012 budget of $43,972,000. The fundamental purpose of the DSC's "legally enforceable management plan" is to achieve the Two Co-Equal Goals and to "...develop, adopt and commence implementation of the Delta Plan by January 1, 2012." The DSC has been duly established as an independent State agency (Delta Plan Chapter 2, Table 2-1). The DSC assumed the duties and responsibility of the previous CALFED Bay-Delta Authority, as mandated by the 2009 water legislation.

The Delta Plan (Appendix C: "Administrative Performance Measures") proposes the establishment of the "Delta Plan Interagency Implementation Committee" (DPIIC), with completion of a report on performance measures due by December 31, 2014. The DPIIC will be comprised of the representatives of the federal, state, and local agencies with management or regulatory authority over the lands, waters, and resources of the Delta ecosystem. This committee will meet at least twice annually to fulfill the legislature's directive that "each agency shall coordinate its actions pursuant to the Delta Plan with the Council and other relevant agencies" (Water Code Section 85204). At the November 15, 2012 DSC meeting, DSC staff submitted an initial recommendation as to the formation of the Interagency Implementation Committee, including its proposed mission, membership, and organization. DSC expects to initiate the committee in Fall 2013.

7.1.2 Delta Conservancy | **Legislature**

Establish a California Delta Conservancy as early as possible in the 2009 legislative session. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Public Resources Code Sections 32320 and 32322

Status Description:

The 2009 water legislation established the Conservancy to act as a primary State agency to implement ecosystem restoration in the Delta. The Conservancy selected their Executive Officer, Campbell Ingram, in March 2011. The 2012 Delta Conservancy Strategic Plan was adopted in March 2012.

All DVSP recommendations have been met, except that members elect the Chair. The Chair is not appointed by the Governor as recommended.

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7.1.3 Delta Protection Commission | **Legislature**

Strengthen the Delta Protection Commission through legislation. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Public Resources Code Sections 29735

Status Description:

The Legislature made the following changes to the DPC governance and authority:
- Directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta.
- Tasked the DPC with issuing recommendations to the Stewardship Council on "methods of preserving the Delta."
- Reduced the terms of office of DPC members from 4 years to 2 years.
- Reduced DPC size from 23 members to 15 members.
- Instructed the DPC to develop an economic sustainability plan for the Delta.
- Gave the DPC authority to facilitate implementation of joint habitat restoration and enhancement plans.

The DVSP recommended that the Legislature require the DPC to modify all of its plans and policies, including its Resource Management Plan to be consistent with the Delta Plan. Further, the DVSP recommended that the DPC authority be modified to review and certify all local city and county general plans for consistency with the DPC Resource Management Plan and the Delta Plan. The Legislature did not make these changes to the role and authority of the DPC.

7.1.4 Delta Science and Engineering Program | **Legislature**

Require the California Delta Stewardship Council to create a Delta Science and Engineering Program and a Delta Science and Engineering Board by September 1, 2009. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Water Resources Code Section 85280

Status Description:

The 2009 water legislation (SBX7-1) established the Delta Independent Science Board (ISB), whose members are to be appointed by the DSC. The DSC appointed ten Delta ISB members on May 27, 2010 for five-year terms. The DSC developed and approved a "Charge to the Delta ISB" on August 26, 2010. In 2012, the DSC added engineering expertise to the ISB when filling a vacancy. The Delta ISB replaces the previous CALFED Independent Science Board. The ISB has been reviewing and commenting on the drafts of the Delta Plan and other Delta planning processes.

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7.1.5 Water Diversion Compliance | **State Water Board**

Improve the compliance of diversions water use with all applicable laws. | State Water Board, DWR

Progress Score: 4 **Enacting Legislation:** Water Code Sections 85086, 85230, and 5100

Status Description:

The 2009 water legislation included water rights enforcement (SBX7-8), which modified the reporting requirements for surface water diversions and added civil and criminal penalties, which had been previously lacking. The law requires any diverter who diverts water after December 31, 1965 to report each July 1 their diversions from the previous year. There are some limited exceptions. Diverters must monitor their diversions on a monthly basis effective January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriates $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. As the result of this legislation, most diverters in the Delta were added to this reporting program for the first time.

The California Code of Regulations (CCR) Title 23, Chapter 2.7, Sections 907 to 930 identifies requirements for the mandatory electronic filing of reports on the State Water Board's internet website. Reports subject to mandatory electronic filing include: supplemental statements of water diversion and use, Water Right Progress Reports by Permittees, Reports of Licensees, Notices of Groundwater Extraction and Diversion, and reports filed by watermasters.

The State Water Board maintains a computer database and online information system for water rights reporting, the Electronic Water Rights Information Management System (eWRIMS). eWRIMS contains information on water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors. The eWRIMS Report Management System provides water right holders the ability to report monthly diversion and use electronically. eWRIMS consists of both a tabular database and an integrated geographic information system (GIS). Users can search and display eWRIMS data by several criteria, including the water right owner's name, watershed, stream system, and county.

Since 2009, the State Water Board hired 20 new staff to perform water right enforcement and public trust protection activities. These resources have been focused on investigations in the North Coast Instream Flow Policy Area to address illegal reservoir diversions and in the Delta counties to achieve compliance with the self-monitoring and measurement requirements of the legislation.

These actions by the Legislature and State Water Board make significant steps to address the DVSP recommendations regarding reporting, penalties, and additional staffing. The DVSP also noted that "the information about current diversions and use in the current water system is inadequate to the task of managing the co-equal values." The DVSP recommended development of a more robust monitoring and management system for stream flows, surface water diversions, and groundwater pumping by the State Water Board, DWR, and others. This system envisions real-time information management and decisionmaking to "provide a better foundation for changes in water diversion timing," as well as efforts to improve regional self-sufficiency. Additional information is needed to understand the progress of these recommended improvements.

On September 19, 2012 Delta Watermaster, Craig Wilson, issued "Improving Water Right Enforcement Authority." The report argues that the State Water Board's weak enforcement authority for water rights is inconsistent with its broad enforcement authority over water quality matters. The Watermaster

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recommends that additional water right administrative and enforcement authority be provided to the State Water Board. The current process for enforcing the constitutional prohibition against the waste or unreasonable use of water is unnecessarily convoluted. He recommends that administrative civil liabilities be added for, among other things, violations of diversion reporting and monitoring requirements.

See also Action 4.2.4, Diversion Data Collection, and Near-term Action NTA01, Water Diversion Information.

7.2.1 Delta Plan | **Delta Stewardship Council**

Develop a legally enforceable Delta Plan. | Governor and Legislature, DSC

Progress Score: 3 **Enacting Legislation:** Water Code Section 85300

Status Description:

The 2009 water legislation requires the DSC to develop a Delta Plan. The DSC approved the final Delta Plan on May 16, 2013. The Delta Plan includes 14 regulatory policies and 71 recommendations to implement the requirements of the 2009 water legislation and other laws to achieve the Two Co-Equal Goals. The process for appealing projects to the DSC for a consistency determination is described in statute and defined in the appeals procedures adopted by the DSC and attached for reference purposes as Delta Plan Appendix B.

7.2.2 Delta Plan Adaptive Management | **Delta Stewardship Council**

Institutionalize adaptive management through updates to the California Delta Ecosystem and Water Plan every five years. | Governor and Legislature, DSC

Progress Score: 3 **Enacting Legislation:** Water Code Section 85300

Status Description:

The Delta Reform Act requires updates to the Delta Plan every five years. This requirement is incorporated into the Delta Plan. The DSC Delta Science Program has developed an adaptive management strategy as part of the Delta Plan. The strategy is covered in detail in Delta Plan Appendix A. The Delta Plan includes example performance measures to evaluate progress and accomplishment in implementing the Delta Plan. The DSC has committed to updating these measures by January 1, 2014. DSC also maintains the CALFED budget and project performance tracking system.

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7.2.3 Adaptive Management Program | **Delta Stewardship Council**

Charge the Delta Science and Engineering Board, with support of the Delta Science and Engineering Program, to develop a science-based adaptive management program to provide for continued learning of, and adaptation to, actions implemented by state, federal, and local agencies in the Delta.

Governor and Legislature, DSC, ISB

Progress Score: 3 **Enacting Legislation:** Water Resources Code Section 85280

Status Description:

The 2009 water legislation established the Delta ISB with a mission to "provide the best possible unbiased scientific information to inform water and environmental decision-making in the Delta. That mission shall be carried out through funding research, synthesizing and communicating scientific information to policymakers and decision makers, promoting independent scientific peer review, and coordinating with Delta agencies to promote science-based adaptive management. The Delta Science Program shall assist with development and periodic updates of the Delta Plan's adaptive management program."

The DSC Delta Science Program has developed an adaptive management strategy as part of the Delta Plan. The strategy is covered in detail in Delta Plan Appendix A. Delta Plan Appendix A discusses generally the monitoring programs and data collection systems to support the adaptive management process. Monitoring programs and data collection systems were needed to support the adaptive management process (See DVSP Action 7.2.3, page 133).

Per Delta Plan Chapter 2, General Recommendation 1 (G R1) the DSC has set a deadline of December 31, 2013 for development of a Delta Science Plan. The Delta Science Plan must address data management, synthesis, and scientific exchange and communication strategies to support adaptive management and improve the accessibility of information.

Note: All references to engineering were dropped from the code by the Delta Reform Act. The "Delta Science and Engineering Board" became the "Delta Independent Science Board (ISB);" the "Delta Science and Engineering Program" became the "Delta Science Program." In 2012, the DSC added engineering expertise to the ISB when filling a vacancy.

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7.3.1 Financing Principles | **Legislature**

Enact a series of principles regarding design of financing into legislation authorizing the Delta Stewardship Council. | Governor and Legislature

Progress Score: 0 **Enacting Legislation:** Water Resources Code Section 85350

Status Description:

The 2009 water legislation (SBX7-1) authorizing the DSC did not include financing principles. The proposed 2012 water bond, (SBX7-2), includes provisions authorizing the California Water Commission to develop guidelines for determining the public benefits that would be eligible for the funds dedicated to water storage projects.

Chapter 8 of the Delta Plan proposes to develop a funding and finance plan after completing the Delta Plan. The chapter suggests five funding principles, discusses potential user fees, identifies five near-term funding needs, but does not provide any estimated costs. Appendix O provides general information with respect to financing.

The BDCP will include a chapter on funding the conservation measures included in the proposed plan, including facilities construction, operations and maintenance and ecosystem restoration. These actions are projected to cost $20 to $23 billion over 50 years.

7.3.2 Delta Governance Funding | **Legislature**

Establish a base of revenues outside the state General Fund for the work of the California Delta Stewardship Council, the Delta Conservancy, the Delta Protection Commission, and related core activities of the Department of Fish and Game, the Department of Water Resources, and the State Water Resources Control Board. | Governor and Legislature, DSC

Progress Score: 0 **Enacting Legislation:**

Status Description:

Other than the Water Bond (SBX7-2), no apparent direction has been provided on financing the work of the DSC, DC, DPC, and other agencies. Chapter 8 of the Delta Plan proposes to develop a funding and finance plan after completing the Delta Plan. The chapter suggests five funding principles, discusses potential user fees, identifies five near-term funding needs, including some of the agency science and oversight, but provides limited information on estimated costs. Appendix O provides general information with respect to financing.

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7.3.3 New Funding Sources | **Legislature**

Find new revenue sources beyond the traditional bond funds or public allocations. | Governor and Legislature, DSC, Others?

Progress Score: 0 **Enacting Legislation:**

Status Description:

The legislature has not identified new sources of funds beyond bond funds or general fund allocations.

Water Bond. Several placeholder bills have been proposed during the 2013-2014 session for discussion of the forthcoming water bond (scheduled for the November 2014 ballot). For example, SB 42 (Wolk) would replace the current bond proposal ($11.1 billion) with a water bond of an unspecified amount. AB 295 (Salas) would replace the current proposed bond with a $3 billion bond for water projects.

Prior Bills. Several bills have previously been proposed in the Legislature to provide long-term funding for ecosystem and water supply reliability projects in the Delta and/or statewide. Other bills would establish principles or an outline of a finance plan. For example Senator Wolk introduced legislation (SB571) in the 2011-2012 session that would direct the California Water Commission to develop a financing plan for water projects across the state and review and approve funding allocations, similar to the California Transportation Commission. None of these bills has passed.

7.4.1 Federal Participation | **Delta Stewardship Council**

Use existing authority under the CALFED Record of Decision to maximize participation of federal agencies in implementation of the Delta Vision Strategic Plan until the Delta Plan is completed. | DSC, Others?

Progress Score: 2 **Enacting Legislation:** Water Code section 85082

Status Description:

Federal law now incorporates the Two Co-Equal Goals. The Delta Plan notes that the federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following: The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem…Nothing herein modifies existing requirements of Federal law. (Section 205)

The Delta Plan does not address authorities or commitments for federal action provided by the CALFED Record of Decision.

The Final Delta Plan notes that the DSC staff will work with federal agency representatives to explore opportunities for federal participation in Delta Plan implementation efforts to help those agencies comply with this new Congressional policy directive, specifically seeking Department of Commerce approval of the Delta Plan under the Coastal Zone Management Act, which would establish DSC authority to review federal actions for consistency with the Delta Plan.

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7.4.2 Coastal Zone Management Act Consistency | **Delta Stewardship Council**

Prepare the California Delta Ecosystem and Water Plan according to guidelines of the Coastal Zone Management Act, in order to achieve ongoing federal consistency. | DSC

Progress Score: 2 **Enacting Legislation:** Water Code sections 85300 (d)(1)(A) and 85300(d)(2)

Status Description:

The 2009 water legislation directed the DSC to craft the Delta Plan consistent with the federal Coastal Zone Management Act of 1972 (16 U.S.C. Sec. 1451 et 9 seq.), and submit the Plan for approval to the United States Secretary of Commerce. The Final Delta Plan notes the following:

"[T]he Delta Reform Act requires the Council to pursue a compliance mechanism that requires consistency of federal actions. The Delta Reform Act identifies the federal Coastal Zone Management Act of 1972 (CZMA), or 'an equivalent compliance mechanism,' as the preferred means to accomplish this objective… In this regard, the Council staff has met, and will continue to meet, with federal agency representatives to identify the appropriate process to submit the Delta Plan to the Secretary of Commerce for approval under CZMA (and with representatives of the California Coastal Commission and the San Francisco Bay Conservation and Development Commission (BDCP), which administer California's coastal management program)."

There is no further discussion of the CZMA requirements and whether the Delta Plan was developed consistent with those requirements.

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Evaluation Topic: 3 - Ecosystem Restoration and Recovery

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3.1.1 Floodplain Inundation | **Department of Fish and Wildlife**

Increase the frequency of floodplain inundation and establish new floodplains. | CDFW, DC, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:**

Status Description:

Yolo Bypass
BDCP Conservation Measure 2 (CM2) in the March 2013 administrative draft of the BDCP Conservation Strategy calls for development of a Yolo Bypass fisheries enhancement plan. As currently written, CM2 proposes a suite of actions including inundating the bypass by notching the Fremont Weir on the eastside of the bypass to increase the availability of floodplain habitat in the bypass for fish rearing and spawning; provide adult fish passage through the Yolo Bypass over the Fremont Weir; and realign Putah Creek. A Yolo Bypass Fishery Enhancement Planning Team has been established by the BDCP Program to develop implementation plans with local government, landowners, and others.

The NMFS OCAP Biological Opinion Reasonable and Prudent Alternatives (RPA) require Reclamation and DWR to prepare an implementation plan for restoration of habitat in the Yolo Bypass by December 31, 2011. Reclamation and DWR have submitted their implementation plan for RPA actions 1.6.1 and 1.7 to NMFS and filed a NOI/NOP in early 2013.

Fremont Weir Fish Passage and Increased Floodplain Inundation. Status: Currently in conceptual design phase, alternatives are being hydraulically modeled. Alternative development, selection, environmental documentation and permitting will begin in 2013. Challenges: loss of agricultural production, potential impacts to federal and state funded restoration sites, loss of public access during flooding, conflicting federal and state easements on private lands.

Lisbon Weir Improvements and Tule Canal Connectivity. Status: Evaluating flow criteria to feed into design options. Project to be funded through BDCP or by responsible agencies for the Biological Opinions. Challenges: Current structure is costly to maintain; progress contingent on completion of larger programmatic environmental documentation.

Lower Putah Creek Re-alignment and Floodplain Restoration. Status: Conceptual designs currently being evaluated. The Yolo Basin Foundation was awarded an ERP grant to develop a fully permitted construction ready design and is conducting environmental compliance and design. Challenges: Continued debate among multiple agencies and stakeholders over design concept – agricultural delivery channel or more naturalistic creek, and locating where the water will enter the Toe Drain to meet the Putah Creek accord and water right requirements. Securing additional funding.

The ERP Conservation Strategy will include two Conservation Priorities related to floodplains in the Delta: 1) Reestablish floodplain inundation and channel floodplain connectivity of sufficient frequency, timing, duration, and magnitude to support the restoration and maintenance of functional natural floodplain, riparian, and riverine habitats, including freely meandering reaches.; 2) Manage floodplain habitats to enhance seasonal shallow water benefits for native fish and wildlife, including the Yolo and Sutter bypasses.

Yolo Bypass Fishery Enhancement Coordination. As noted above, there are numerous fishery enhancement planning efforts being undertaken concurrently in

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the Yolo Bypass that are being coordinated across numerous federal and state agencies, local governments, NGOs and stakeholders. Specifically, CCDFW was awarded a Section 6 HCP planning grant to assist with the development of BDCP. One of the many tasks is to provide funding to ensure close coordination between BDCP and OCAP fishery enhancement planning efforts. There is also close coordination between other fishery restoration actions (e.g. Lower Putah Creek Re-alignment and BDCP/OCAP fishery restoration planning) to ensure that any plans or actions are consistent and meet the needs of all planning efforts.

Other Floodplain Actions
McCormack-Williamson Tract. See NTA08, Near-term Restoration Actions

Seasonally Inundated Floodplain Restoration. The BDCP has proposed CM5-Seasonally Inundated Floodplain Restoration, which includes restoring 10,000 acres of seasonally inundated floodplain habitat within the north, east, and/or south Delta. It is assumed that the majority of this habitat will be created in the south Delta. To help facilitate the development of restoration locations the Resources established the BDCP South Delta Habitat Working Group in August 2011. The goal of the group was to investigate opportunities for improving habitat in the South Delta that also provided flood management benefits. While BDCP is not responsible for paying for flood management programs, the conservation measure should be developed in a way that integrates flood hazard reduction and other economic benefits where consistent with BDCP objectives. Concept level planning has resulted in the identification of four south Delta corridors (see BDCP Figure 3.4-20) for potential implementation of floodplain restoration .

FloodSAFE
Restoring natural river processes, including floodplain inundation, is an important component of statewide water management planning in the CVFPP and Conservation Strategy (CS). Flood bypass concepts for the Yolo Bypass and San Joaquin River are included in both planning activities. CCDFW is coordinating closely with DWR to integrate ecosystem restoration with flood and water management actions and to develop a Conservation Strategy that will provide net benefits to species and habitat while increasing permitting efficiency. DWR solicited grant proposals for projects within the State Plan of Flood Control Area (which includes the Yolo Bypass and part of the Delta) that would provide advanced mitigation for activities planned as a part of the CVFPP. CCDFW reviewed and commented on the forty-one grant proposals for restoration projects within the Sacramento and San Joaquin watersheds that were submitted, of which seven will be awarded funding. Those seven projects are in various locations, but three are within the Delta or nearby are 1) State of California West Sacramento Floodplain Mitigation Bank (proposal from WSAFCA); 2) Bullock Bend Conservation Bank (for Salmonid habitat) which is in Yolo county within the Colusa basin on the Sacramento River, and 3) Brush Rabbit Flood Refugia, Census & Reintroduction within the San Joaquin National Wildlife Refuge.

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3.1.2 Tidal Habitat Restoration | **Department of Fish and Wildlife**

Restore tidal habitats and protect adjacent grasslands and farmlands throughout the Delta, with active near-term pursuit of restoration targets. | CDFW, DC, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Sections 85085(c) and (d)

Status Description:

The agencies are coordinating regional restoration planning efforts, including the Ecosystem Restoration Program (ERP), the Fish Restoration Program Agreement (FRPA), BDCP, the Delta Plan, the Delta Conservancy's Restoration Network, and the Suisun Marsh Plan. CCDFW, NMFS, and USFWS are finalizing the ERP Conservation Strategy for the Delta (See NTA08, Near-term Restoration Actions)

Ecosystem Restoration Program (ERP)
ERP has 32 ongoing restoration projects in the CALFED Bay and Delta Region (including acquisition (3), planning (4), pilot/demonstration projects (2), full-scale implementation (4), monitoring (2), research (16), and technical support (1). These projects total approximately $38M. Restoration of intertidal and shallow subtidal areas continues to be a very high priority for the Delta and will generally be located on the margins of lands near sea level.

Example ERP Tidal Marsh restoration projects:
ERP-02D-P54. Aims to acquire through easement up to 1,100 acres of Delta slough habitat in the Cache Slough Complex. Status: one 146-acre easement on the Thomas Ranch has been acquired, and an additional 155 acres of easements on Barker Slough are being considered. All easements for this project will be held by Solano Land Trust.

ERP-07D-P01, and 07D-P02 are aspects of a larger effort to acquire up to 500 acres in Suisun Marsh through either fee title or easement. P01 is covering the public notification and site selection, and P02 deals with the actual acquisition. When the acquisition occurs it is anticipated that the CCDFW or a 3rd party will either be the owner or hold the easement.

See Ecosystem Restoration Program Plan- Year 13 Annual Report (State FYs 2012-13; Federal FY 2013; https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=65144)

Fish Restoration Program Agreement (FRPA)
FRPA was signed on October 18, 2010, and addresses specific OCAP habitat restoration requirements of the USFWS and NMFS Biological Opinions (BOs) for State Water Project (SWP) and Central Valley Project (CVP) operations, including the habitat restoration requirements of the CCDFW Longfin Smelt Incidental Take Permit (ITP) for SWP Delta Operations. The specific actions and mitigation acreage that will be implemented through FRPA as follows:

- DWR to restore minimum of 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh (Delta Smelt BO RPA Component 4)
- Participate in the restoration of Battle Creek (NMFS BO RPA Actions 1.2.6)
- Funding and technical assistance for Yolo Bypass, Liberty Island and Lower Cache Slough fish passage improvement (NMFS BO RPA Action Suite 1.6 and 1.7)
- 800 acres and associated subtidal wetland habitat in the mesohaline part of the Delta estuary (Longfin Smelt ITP Condition 7)

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FRPA Milestones

- FRPA signed on October 18, 2010
- $12 million transferred to the Ba Σle Creek Salmon and Steelhead Restora Θon Project
- CCDFW hires Region and Water Branch Sta f Eήvironmental Scien Θsts into FRPA program, Winter 2012
- FRPA Implementa Θon Strategy for Habitat Restora Θon and Other Ac Θons for Listed Delta Fish approved March 9, 2012 – includes enhancement plans for Liberty Island and lower Cache Slough
- Cache Slough Complex Conserva Θon Assessment to be completed by Fall 2013
- BDCP approved for six posi Θons in CCDFW Region 3 to develop and run the FRPA monitoring program in consulta Θon with IEP and BDCP monitoring programs
- FRPA monitoring program is in development in consulta Θon with IEP, BDCP, and ERP
- Programma Θc Stakeholder Assessment and Communica Θon & Engagement Plan completed. Public Outreach Program underway and ongoing
- FRPA website completed and online at h Σp://www.water.ca.gov/environmentalservices/frpa.cfm
- Overlook Club in Suisun Marsh purchased for restora Θon
- Land Acquisi Θon work group formed and ac Θvely pursuing land for restora Θon and iden Θfying constraints and opportuni Θes for Θmely acquisi Θon

Prospect Island Tidal Restoration Project milestones:

- Phase 1 hydraulic modeling completed
- DRERIP evalua Θon of Prospect Island design alterna Θves completed h Σps://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=59671
- Phase 2 hydraulic modeling underway
- Seepage Analysis for Ryer Island in final analysis
- Prospect Island Communica Θon and Engagement Plan completed
- NOP released in May 2013
- Public scoping mee Θng completed June 10, 2013
- Project permi ţ ng underway
- Interim land management underway

FRPA Constraints:

USACE 408 permits for breaching Sacramento Deep Water Ship Channel levee on the west side of Prospect Island preclude inclusion of west side levee breaches. USACE would have to decommission the entire Sacramento DWSC navigation project before granting a permit to breach. Although the Port of Sacramento is not an economically viable institution, USACE is obligated to maintain the navigation project.

Performance Measures

Significant progress has been made towards generating performance measures for ecosystem restoration in the Delta, including the following.

- A suite of dra Ōperformance measures for floodplain restora Θon is included in the ERP Conserva Θon Strategy described above.

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• Several coordinated e forts to generate performance measures for the Delta ecosystem are underway:

o the Delta Plan (in coordina on with the DSP and DSC)

o the California Estuary Monitoring Workgroup for the My Water Quality web portal

• A conceptual model for tidal marsh func on has been developed under DRERIP (see h p://www.dfg.ca.gov/ERP/conceptual_models.asp), informing identification of expected outcomes for restoration projects, e.g. FRPA's Prospect Island, Lower Yolo Ranch.

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3.2.1 Habitat Corridors | **Department of Fish and Wildlife**

Improve physical habitats along selected corridors by 2015. | CDFW, DC, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:**

Status Description:

CCDFW continues to plan for and promote habitat corridors and contiguous habitats in all of its conservation and restoration activities. Examples of programs include BDCP, FRPA and related FRPA Implementation Plan, and ERP Conservation Strategy, which guides ERP activities, DWR FloodSAFE Environmental Stewardship Program, and county-level conservation planning.

Ecosystem Restoration Program
CCDFW projects that contribute to this action include Dutch Slough (expected to go to construction in 2013), Lindsey Slough, Hill Slough and Liberty Island, the McCormack Williamson flood corridor, and the Putah Creek re-alignment in the Yolo Bypass. Two 2005 Prop 50 grants to develop habitat on working landscapes have also added habitat in the Delta and Delta watersheds upland in Yolo and Solano County. There were a number of agricultural habitat development projects on Delta islands. In Yolo and Solano Counties, nine Sacramento perch breeding ponds connected to the Delta were created in addition to miles of riparian habitat on Willow Slough and other agricultural water delivery channels.

FloodSAFE
DWR is developing a Conservation Strategy for the CVFPP, based on the Conservation Framework included in the Draft CVFPP. CCDFW is participating in the development of the Conservation Strategy to identify areas for restoration or recovery that will improve physical habitats in the selected corridors. DWR conducted an RFP in 2012 for restoration projects that will provide early implementation restoration for the Conservation Strategy. These projects should be funded and underway by 2015. In the long term, DWR will also fund and implement additional projects that will improve habitat corridors through their larger effort to develop a NCCP/HCP for the CVFPP. CCDFW is coordinating with DWR on the early stages of development for an NCCP to identify habitat corridor and floodplain improvement opportunities.

County Planning
CCDFW also participates at a regional level with multiple counties in the development of county-wide NCCPs. For example, NCCPs are being developed in Butte, Yuba/Sutter, and Yolo Counties. These NCCPs all share boundaries and are being developed in consideration of the restoration and recovery actions established in each individual plan. CCDFW is coordinating among multiple agencies to facilitate the NCCP process, and this will lead to improved physical habitats in the selected corridors going through multiple county boundaries.

Other Activities
The California Essential Habitat Connectivity Project (CEHCP) (Spencer et al. 2010) mapped corridors to provide ecological integrity of existing preserved areas and those areas critical to maintaining sustainable populations of terrestrial species. The CEHCP can be used to complement ERP activities within a statewide context.

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3.2.2 Fish Migration Flows | **State Water Board**

Provide adequate flows at the right times to support fish migrations, and reduce conflicts between conveyance and migration, by 2012. | State Water Board, DWR, Reclamation

Progress Score: 2 **Enacting Legislation:** Water Code Sections 85084.5 and 85086

Status Description:

Flow Criteria Report. The 2009 water legislation directed the State Water Board to develop new Delta flow criteria by August 2010 as necessary to protect public trust resources. The new criteria are intended to inform planning decisions for the Delta Plan and the Bay-Delta Conservation Plan. In 2010, the State Water Board prepared a report titled "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem" (Flow Criteria Report). The "Flow Criteria Report" included a prioritized schedule and estimate of costs to complete in-stream flow studies for the Delta and for high priority rivers and streams in the Delta watershed and Sacramento River watershed by 2018.

Instream Flow Studies. The 2009 water legislation also directed the State Water Board to complete instream flow studies for two other categories of rivers and streams, by two specific deadlines:
1) High priority rivers and streams in the Delta watershed that were not covered in the "Flow Criteria Report" by 2012; and
2) All major rivers and streams outside the Sacramento River watershed by 2018.

As a result of this legislative objective, the State Water Board released its "Instream Flow Studies for the Protection of Public Trust Resources: A Prioritized Schedule and Estimate of Costs (December 2010)".

CDFW's Quantifiable Biological Objectives and Flow Criteria. The 2009 water legislation (SBX7-1) also directed CDFW, in consultation with USFWS and NMFS, to develop and recommend to the State Water Board Delta flow criteria and quantifiable biological objectives for aquatic and terrestrial species of concern dependent on the Delta by November 2010. In response, CDFW completed its report "Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta" (CDFW QBO Report) on December 3, 2010.

All three reports were submitted to, and subsequently approved by, the Delta Stewardship Council by December 2010, thereby meeting the statutory deadlines.

Bay-Delta Plan Update. In 2006 the State Water Board adopted the "San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan" (the Bay-Delta Plan). The State Water Board initiated its "Bay-Delta Plan Update" in 2012. The "Flow Criteria Report," "Instream Flow Studies," and "CDFW QBO Report" will inform this four-phase update, which shall include proposed increases in flows that are tributary to the Sacramento-San Joaquin Delta (Delta) and improve water quality in the southern Delta.

Phase 1, initiated in 2012, will update flow objectives to protect fish and wildlife in the San Joaquin River and its salmon-bearing tributaries, and update salinity objectives to protect agriculture in the southern Delta. The State Water Board expects to make a decision on Phase 1 in August 2013.

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Phase 2 will address the remainder of the Bay-Delta Plan, including Delta outflow and export objectives, and other measures needed to protect Delta fish migration. Phase 2 will focus on the following issues: (1) Delta outflow objectives, (2) export/inflow objectives, (3) Delta Cross Channel Gate closure objectives, (4) Suisun Marsh objectives; (5) potential new reverse flow objectives for Old and Middle Rivers; (6) potential new floodplain habitat flow objectives; (7) potential changes to the monitoring and special studies program, and (8) other potential changes to the program of implementation. The State board expects to make a decision regarding Phase 2 in 2014.

See also Action 3.4.1, for further information on Instream Flows.

3.2.3 Flood Conveyance Capacity Expansion — **Department of Water Resources**

Immediately use the Central Valley Flood Protection Plan to identify areas of the San Joaquin River within and upstream of the Delta where flood conveyance capacity can be expanded.

DWR, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

In June 2012, the Central Valley Flood Protection Board approved the Central Valley Flood Protection Plan (CVFPP), which identifies flood conveyance capacity expansion options in the North Delta and South Delta. The Plan provides an overall framework for flood management. DWR is now conducting regional studies, which will examine flood bypass opportunities on the San Joaquin River. On May 1, 2013, DWR issued letters of commitment to fund six regional flood management studies, including three on the San Joaquin River. When the regional plans are complete, DWR will incorporate feasible components of the regional plans in the 2017 CVFPP Update that are consistent with the State Systemwide Investment Approach as defined in 2012 CVFPP.

Paradise Cut Flood Bypass Expansion Project. The South Delta Water Agency is working with DWR and local landowners to expand the Paradise Cut Bypass to route flood flows away from urban areas in Lathrop and Stockton along the San Joaquin River and allow for a greater amount of flow to enter the Cut during high flow times. The project includes necessary dredging and levee work downstream of the Cut to safely pass the additional flow into the deeper Delta channels at acceptable or no additional risk to lands of that area. The project will include overflow and tidal habitat where feasible in coordination with fishery agencies.

Http://www.water.ca.gov/cvfmp/regionalplan/

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3.2.4 Delta Recreational Investment | **Delta Protection Commission**

Using the National Heritage Area and regional economic development planning efforts, begin immediately to identify ways to encourage recreational investment along the key river corridors. | DPC, Local Governments, DC, CDPR

Progress Score: 3 **Enacting Legislation:**

Status Description:

National Heritage Area. The DPC prepared a feasibility study on a National Heritage Area (NHA) designation for the Delta (draft October 2011, final July 2012) and a Delta Economic Sustainability Plan (final January 2012). National Park Service (NPS) staff in San Francisco and Washington, D.C. reviewed the Feasibility Study for consistency with the NPS criteria for NHA and provided an official letter which stated that it met the ten NPS feasibility study criteria. The study was also submitted to the Delta Stewardship Council for inclusion in the Delta Plan. CDPR released the draft "Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh" for public review in April 2011.

On February 4, 2013, U.S. Senators Dianne Feinstein and Barbara Boxer introduced the Sacramento-San Joaquin Delta Heritage Area Act, a bill that creates California's first National Heritage Area. The bill (S.228) will establish the Sacramento-San Joaquin Delta as a National Heritage Area, to be managed by the Delta Protection Commission. The goal of the National Heritage Area is to conserve and protect the Delta, its communities, its resources and its history. On March 7, 2013, Congressman John Garamendi with original cosponsors Representatives George Miller, Doris Matsui, Jerry McNerney, and Mike Thompson, along with Northern California County Supervisors, announced the introduction of the Sacramento-San Joaquin Delta National Heritage Area Establishment Act. The bill, H.R. 1004, is the identical House companion to S.228.

While the national designation is under consideration, the DPC is embarking on a Delta Heritage Area Initiative (DelHAI) to advance and elevate recognition of the Delta's unique values. By advancing activities and projects that elevate and promote the Delta, the initiative hopes to demonstrate the region's capacity for possible NHA designation.

The Great California Delta Trail. Pursuant to the provisions of Senate Bill 1556 (Torlakson), DPC has continued to develop and plan a trail network through all five counties of the Delta. Grant funding from the California Coastal Conservancy as well as funding and resource commitments from Contra Costa County and the National Parks Service were received allowing DPC to initiate the outreach process in Contra Costa and Solano Counties.

The "Trail Blueprint Report for Contra Costa and Solano" was completed in September 2010. It is a model for the development of a "Trail Blueprint Report for Sacramento, San Joaquin, and Yolo Counties." DPC staff commenced work on the new report in March 2012. When completed, DPC will present it for adoption by the Commission as well as the Boards of Supervisors for Sacramento, San Joaquin, and Yolo Counties. Stakeholder Advisory Committees and Technical Advisory Committees have been formed for each County to be part of the development process. The target date for adoption by the DPC has been pushed out to June 2013.

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3.3.1 Fish Entrainment | **Department of Water Resources**

Reduce fish kills in Delta pumps by instituting diversion management measures by 2009, implementing near-term conveyance improvements by 2015, and relocating diversions. | DWR, Reclamation, Others?

Progress Score: 2 **Enacting Legislation:**

Status Description:

The courts have implemented requirements for SWP and CVP diversions to reduce impacts to listed species. DWR and Reclamation are implementing those measures as outlined in NOAA's National Marine Fisheries Service (NMFS) Biological Opinion and subsequent stipulation agreements. In compliance with the requirements of the NMFS Opinion, DWR has tested non-physical barriers at the head of Old River and Georgiana Slough to reduce entrainment. Initial results of the field evaluations showed reduced entrainment, but further analysis is ongoing to evaluate potential increases in predation and barrier performance. DWR is evaluating the feasibility of other engineering solutions to reduce entrainment of salmonids into the interior Delta. The final report for the Release Site Predation study was completed in 2010 and included specific recommendations to increase survival of salvaged fish. In related work, DWR is studying predation near the pumps to determine reduction targets and guide future management actions. In 2012, the Department also undertook juvenile steelhead and salmon studies using acoustic telemetry to study route selection probabilities and survival under different flow scenarios in the San Joaquin River and South Delta.

The Biological Opinion includes diversion management actions such as Delta Cross Channel (DCC) gate closures and export restrictions for OMR management is the primary way that entrainment is being managed. Through these RPAs exports are managed to minimize entrainment and alteration of migratory pathways. In support of DCC gate closures, the Bureau of Reclamation released an Environmental Assessment and a Finding of No Significant Impact for proposed 10-day closures during the first half of October, 2012-2016. A DCC closure did not occur in 2013 during the Mokelumne River pulse flow due to water quality issues in the Delta associated with low flows.

Other RPA actions not directly related to entrainment reduction measures include: (1) initiating efforts to modernize and build additional salvage release sites to reduce predation and increase salvaged fish survival, (2) Initiating design and construction of a fish science laboratory at the SWP John E. Skinner Delta Fish Protective Facility (SDFPF) to support fish research activities related to SWP operations and compliance, (3) initiating real-time coded wire tag reading and reporting at the SWP and CVP salvage facilities to support delta water operations management. Further actions are also incorporated into the BDCP process.

Salvage

For the Water Year 2012, fish salvage decreased at both the SDFPF and the CVP's Tracy Fish Collection Facility (TFCF). TFCF salvage was 475,082, a marked decrease from the previous year and below the previous record low of 1,318,613 set in 2010. During the 2011 Water Year, annual fish salvage of all fish species combined at the TFCF was high at 8,724,498. Annual salvage at the SDFPF in 2012 was 1,607,286, nearly a 50% reduction from the number salvaged in 2011 (3,092,553).

Mokelumne River Projects

Beginning in fall 2009 the Lower Mokelumne River Partnership implemented three key management actions designed to improve survival and returns of fall-

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run Chinook salmon to the Mokelumne River while reducing stray rates to other Central Valley rivers (primarily the American River). The management actions included moving the release location for Mokelumne River Fish Hatchery Chinook production, initiating fall pulse/attraction flows, and working with USBR to initiate temporary closures of the Delta Cross Channel. Additional measures, such as minimizing predators below Woodbridge Dam, and gravel augmentation in the lower Mokelumne have also been undertaken.

Based on four years of data, it appears that the combined effects of the key management actions have achieved the intended goals. In each of the past four years Chinook returns to the Mokelumne River have improved, and in 2011 the return was the highest observed since 1940 with an escapement of more than 18,000 salmon. Stray rates to the American have markedly declined from more than 50% in 2009 to less than 10% in 2011. Although the Central Valley as a whole saw an increase in escapement, the San Joaquin Basin returns declined by approximately 9% from 2011. Mokelumne River escapement was well above 2009 and 2010 counts, with 12,027 adults returning in 2012, but short of the 2011 count of 18,596. Based on these initial results, EBMUD is working with its partners (CDFW, USFWS, USBR) to develop a 5-year study plan to further evaluate the effectiveness of the management actions and identify potential operational constraints.

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3.3.2 Invasive Species | **Department of Fish and Wildlife**

Control harmful invasive species at existing locations by 2012, and minimize or preclude new introductions and colonization of new restoration areas to non-significant levels. | CDFW, DWR, State Water Board, CDFA

Progress Score: 4 **Enacting Legislation:**

Status Description:

Prevention is the least ecologically harmful and most cost effective way to combat invasive species. Statewide invasive species preventative actions implemented by CCDFW within or that benefit the Delta Region include: assessing live bait as a vector and developing live bait regulations; developing a fishCCDFW fish hatchery Aquatic Invasive Species (AIS) monitoring and prevention protocol; developing and distributing AIS information in state hunting, fishing, and boating regulations and licenses; providing AIS outreach and education materials to the public, including direct mailings to boat owners, posting notifications at waterbodies, distributing informational cards at multiple locations statewide, and providing information through the media; providing watercraft inspection and decontamination trainings to local communities statewide; sponsoring Dreissenid mussel workshops; sponsoring AIS workshops for waterbody managers; initiating the development and implementation of AIS monitoring plans for high risk waters in the state; increasing inspections for AIS at California Department of Food and Agriculture Border Protection Stations; training and deploying CCDFW staff to survey and inspect waterbodies statewide; purchasing and deploying portable recreational equipment wash stations in each CCDFW Region; compiling AIS prevention and control programs; identifying reciprocal AIS inspection programs; and coordinating statewide AIS data.

CCDFW is actively involved with the Invasive Species Council of California (ISCC) and the California Invasive Species Advisory Committee (CISAC). ISCC helps coordinate and ensure complimentary, cost-efficient, environmentally sound, and effective state activities for invasive species as advised and recommended by CISAC.

CCDFW's Invasive Species Program publishes a quarterly newsletter, Eyes on Invasives, dedicated to informing the public about current invasive species activities being conducted in California.

CCDFWs Marine Invasive Species Program coordinates with the State Lands Commission to control the introduction of nonnative species from the ballast of ocean-going vessels. The program includes biological surveys to monitor the coastal and estuarine waters of the state to determine the level of invasion by nonnative species, ballast water inspections, and monitoring and research. Survey sites within the Delta include: the Ports of Sacramento and Stockton, San Pablo Bay, Suisan Marsh, and San Francisco Bay.

CCDFW's Lands Program actively controls many invasive plant species on CDFW-managed lands throughout the state using chemical and non-chemical methods.

Within the Delta Region, CCDFW controls invasive plants at Grizzly Island Wildlife Area (WA), Hill Slough, Peytonia Slough, and Yolo Wildlife Area.

CCDFW's final ERP Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta, Sacramento Valley and San Joaquin Valley Regions contains

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conservation priorities for Non-Native Invasive Species. The DSC has incorporated actions from the July 2011 draft ERP Conservation Strategy into the Delta Plan, along with the supporting text. Including these actions in the Delta Plan has the potential increase coordination in the control of invasive species in the Delta.

CCDFW is working with DWR to develop two conservation measures for the Delta under the BDCP that address: (1) controlling the introduction and spread of invasive aquatic plant species within BDCP aquatic restoration areas and (2) preventing the introduction of new and reducing the spread of existing aquatic invasive species via recreational watercraft, trailers, and other equipment.

CCDFW has funded, published, and/or assisted in the preparation of several documents, including response plans, action plans, guidebooks, and education/outreach materials; and developed and initiated response, action, and education/outreach programs for managing specific aquatic invasive species (AIS) such as Dreissenid mussels (quagga and zebra mussels).

Since quagga mussels were first discovered in California in 1997, CCDFW's ongoing coordination efforts with federal, state, and local agencies and stakeholder groups to provide education, outreach, and training to the public and other entities, and implement watercraft inspection programs, has prevented quagga and zebra mussels from becoming established in the Delta.

Priority invasive species currently present in the Delta include aquatic weeds, both native and nonnative species. Some common Delta invasive aquatic plant species include Brazilian waterweed, water hyacinth, South American spongeplant, Eurasian watermilfoil, Carolina fanwort, Ludwigia spp., water pennywort, and coontail. The California Department of Boating and Waterways (CDBW) is authorized by law (Section 64 of the Harbors and Navigation Code [HNC]) to control Brazilian waterweed, water hyacinth, and South American spongeplant in the Delta, its tributaries, and Suisun Marsh. Additional weeds can only controlled by CDBW when they are added to the HNC through the legislative process. AB 763 (Buchanan), introduced during the 2013-2014 legislative session, proposes to create a scientific-based process in which Delta aquatic weeds can be added to the list of species to be treated by CDBW through a risk assessment performed by CCDFW, in-lieu of introducing legislation each time an invasive aquatic weed needs to be treated in the Delta. This process will provide greater coordination between CCDFW and CDBW to prioritize and control invasive aquatic plants in the Delta.

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3.4.1 Instream Flows | **Department of Fish and Wildlife**

Charge the Department of Fish and Game with completing recommendations for in-stream flows for the Delta and high priority rivers and streams in the Delta watershed by 2012 and for all major rivers and streams by 2018.

Governor and Legislature, CDFW

Progress Score: 2 **Enacting Legislation:** Water Code Sections 85084.5 and 85087

Status Description:

The 2009 water legislation (SB7X-1) directed the State Water Board, in consultation with CCDFW, to submit to the Legislature by December 31, 2010 "a prioritized schedule and estimate of costs to complete instream flow studies for the Delta and for high priority rivers and streams in the Delta watershed, not otherwise covered by Section 85086, by 2012, and for all major rivers and streams outside the Sacramento River watershed by 2018. The State Water Board completed its report to the Legislature in December 2010, noting that the 2012 and 2018 deadlines are unrealistic for completing thorough instream flow studies. The report estimated that completing instream flow studies for the 138 streams identified would cost approximately $140 million ($32.5 million for the 2012 deadline and $107 million for the 2018 deadline).

Both SBX7-1 and PRC sections 10000-10005 require CCDFW to identify and evaluate stream flows and what is needed to protect fish and wildlife resources of the state. ERP's Proposition 84 budget provides funding for IFP instream flow studies on Sacramento/San Joaquin River Delta (Delta) tributaries. By submitting flow recommendations for Delta tributary studies to the State Water Board, CCDFW will meet the intent of the legislation and the State Water Board timeline for developing new flow criteria (refer to Water Code section 85086 (a) and (c)(1)). CCDFW will conduct and provide oversight on new flow studies on Delta tributaries as necessary to fulfill the mandates of SBX7-1 over the next 10 years (FY 2010/2011 through FY 2020/2021). CCDFW and the State Water Board have coordinated instream flow study priorities to avoid duplication between CCDFW's statewide list of 22 priority streams (Public Resources Code 10001) and the State Water Board's Instream Flow Studies for the Protection of Public Trust Resources: A Prioritized Schedule and Estimate of Costs (2010).

Six of the 22 priority streams on CCDFWs PRC 10001 statewide list are Delta tributaries. All six of these streams have flow studies underway. CCDFW staff have developed a Sacramento-San Joaquin River Delta tributary priority list to implement instream flow studies by FY 2020/2021. In 2011, IFP staff identified Butte, Deer, and Mill Creeks as important spring-run Chinook salmon (SRCS) tributaries of the Sacramento River that will benefit from instream flow studies. CCDFW staff has identified adult passage as limiting SRCS abundance in these streams. CCDFW has initiated a contract with the USFWS under ERP's Proposition 84 funding to complete instream flow studies on Delta tributaries. Fish passage assessment and hydraulic field data collection began in 2012 on lower Butte Creek. Completion of the study and submission of an instream flow recommendation is anticipated by 2016. CCDFW will amend the USFWS contract in 2013 to include a flow study on another Delta tributary yet to be determined. IFP staff is coordinating internally and with State Water Board staff to identify the second stream to be completed under the USFWS contract. IFP staff began scoping instream flow studies on Deer and Mill Creeks in 2012 under ERP's Proposition 84 funding. IFP staff is working with Region 1 staff on reconnaissance level surveys, existing study review, study design, stakeholder outreach planning, and preliminary data collection on Deer and Mill Creeks. IFP staff installed temperature loggers on Mill Creek in spring of 2013 to begin developing a temperature profile over time. Completion of the studies and submission of instream flow recommendations for Deer and Mill Creeks are anticipated by 2016.

Priority Sacramento-San Joaquin Rivers Delta tributaries for which the IFP may develop flow recommendations over the next 10 years under ERP's Proposition

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84 funding include: Battle Creek, Clear Creek, Antelope Creek, Cottonwood Creek, Cow Creek, Bear River, Tuolumne River (current FERC study), Merced River (current FERC study), Middle Fork Feather River, and Stanislaus River (current USFWS study).

The CCDFW continues to maintain a partnership with the State Water Board to align priority setting, study availability, and data evaluation. CCDFW staff provides field methods training, promotes instream flow study implementation coordination, and participates in quarterly interagency meetings to coordinate activities and options on Sacramento-San Joaquin Rivers Delta tributaries and other instream flow studies with State Water Board staff. In 2011, CCDFW initiated development of an instream flow Quality Assurance (QA) Program under contract with the QA Research Group at Moss Landing Marine Laboratories. The QA Program is developing standard operation procedures (SOP) and fact sheets to provide instream flow study design tools and guidance. The SOPs will provide assistance for agencies, contractors, NGOs, and scientists to collect defensible, comparable instream flow data that meets CCDFW's needs under mandates in PRC 10000-10005. One SOP for critical riffle analysis was completed and made available for use in 2012. Four additional SOPs were developed in 2012 and will be completed in 2013 for: 1) measuring discharge; 2) collecting stream bed topography and water surface elevation data; 3) conducting flow duration analyses; and 4) conducting wetted perimeter analysis.

CCDFW instituted its "Instream Flow Program" website in 2010 (http://www.dfg.ca.gov/water/instream_flow.html). CCDFW continues to seek funding through grant programs and other efforts for implementation of the CCDFW Instream Flow Program (IFP). The 2012 CCDFW IFP Annual Report is due for release in June 2013. The 2011 annual report can be found on the websit.

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3.4.2 Wet Period Diversions | **State Water Board**

Develop and adopt management policies supporting increased diversion during wet periods, a joint effort of the State Water Resources Control Board, the Department of Fish and Game, the Department of Water Resources, and related federal agencies, by 2012.

State Water Board, CDFW, DWR, Fed. Agencies

Progress Score: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

Flow Criteria Report. The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. Accordingly, in 2010, the State Water Board prepared a report titled "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (Flow Criteria Report)." The report was a joint effort of the State Water Board, the Department of Fish and Game, the Department of Water Resources, and related federal agencies. The Flow Criteria Report was submitted to, and subsequently approved by, the Delta Stewardship Council, also in 2010.

The "Flow Criteria Report," describes the flows that would be needed in the Delta ecosystem if fishery protection were the sole purpose for which its waters were put to beneficial use. In keeping with the narrow focus of the legislation, this report only presents a technical assessment of flow and operational requirements to provide fishery protection under existing conditions. It includes the 3.4.2 recommendations on increased diversion during wet periods, the 3.4.3 recommendation on increased spring outflow and the 3.4.4 recommendation on fall outflow variability.

The "Flow Criteria Report" does not consider or balance competing uses for water such as hydropower, recreational, municipal and industrial, and agricultural supply. Restoration and protection of the Delta ecosystem will also depend on many factors, including actions to improve habitat, reduce salmon predation, minimize entrainment of fish at pumping facilities, prevent pollution, and increase river flows. These competing uses of water are other factors are being considered in the State Water Board's current planning efforts in the "Bay-Delta Plan Update." As part of the Update team, CDFW is providing scientific and technical input for constraints on exports when water flows are low and when CDFW believes there will be harm to fisheries and listed species.

Please refer to Action 3.2.2 for more information on the update process.

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3.4.3 Delta Outflow | **State Water Board**

Adopt new State Water Resources Control Board requirements by 2012 to increase spring Delta outflow. Commence implementation no later than 2015. | State Water Board

Progress Score: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Actions 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for priority tributaries to the Delta. The update will be completed in four phases. Phase 2 will include updates of increased Delta spring outflow objectives. The State Water Board expects to establish the new Delta flow objectives in 2014 and commence implementation thereafter.

More information is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml

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3.4.4 Fall Delta Outflow | **State Water Board**

Adopt new State Water Resources Control Board requirements by 2012 to reintroduce fall outflow variability no later than 2015. | State Water Board

Progress Score: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Actions 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for priority tributaries to the Delta. The update will be completed in four phases. Phase 2 will include review of Delta fall outflow variability standards.

More information is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml

Fall Low Salinity Habitat (FLaSH). On July 9, 2012 the U.S. Department of the Interior and the U.S. Geological Survey in conjunction with the Bureau of Reclamation and Interagency Ecological Program (IEP) released a draft of the Synthesis of Studies in the Fall Low Salinity Zone of the San Francisco Estuary with respect to Fall Low Salinity Habitat (FLaSH). On September 12, 2012 an Independent Science Review Panel released its Study Synthesis – Year One of the Delta Fall Outflow Adaptive Management Plan. It contains a review of the draft FLaSH report and the draft 2012 Fall Outflow Adaptive Management Plan. The FLaSH studies investigated the health of delta smelt related to the position of Fall Low Salinity Habitat.

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3.4.5 San Joaquin River Flow Objectives | **State Water Board**

Increase San Joaquin River flows between February and June by revising the State Water Resources Control Board's Vernalis flow objectives and the state and federal water projects' export criteria. Revise the flow objectives and criteria no later than 2012.

State Water Board

Progress Score: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. Please see Actions 3.2.2 and 3.4.2 for additional information.

Bay-Delta Plan. As described more fully in Action 3.2.2, the State Water Board is developing and implementing updates to the "San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan" (the Bay-Delta Plan) including flow objectives for San Joaquin River. Proposed changes to the "Bay-Delta Plan" include revised February through June Lower San Joaquin River (LSJR) flow objective applicable to the salmon bearing tributaries to the LSJR (the LSJR, Merced, Tuolumne, and Stanislaus rivers) and an associated program of implementation to support and maintain the natural production of viable native LSJR watershed fish populations migrating through the Delta; and revised numeric southern Delta salinity objectives and an associated program of implementation to protect agricultural beneficial uses in the southern Delta.

Report on Scientific Basis. The "Technical Report On The Scientific Basis For Alternative San Joaquin River Flow And Southern Delta Salinity Objectives" was released by the State Water Board in February 2012 and updated in December 2012. The report includes the 3.4.5 recommendations on increased spring flows. The finding of the report will inform the updates to the Bay-Delta Plan.

Draft SED. As mentioned in Action 3.2.2, on December 31, 2012, the State Water Board released for public review and comment, a draft Substitute Environmental Document (SED) for the updates to the Bay-Delta Plan. The SED supports potential changes to San Joaquin River flow and southern Delta water quality objectives and a program of implementation to be included in the Bay-Delta Plan. The proposal is intended to balance water needs for fishery protection with diversions and exports for municipal supply, agriculture, and hydropower uses as per the recommendations of Action 3.4.5.

From Bay Delta Planning Efforts Fact Sheet 0404113.docx. More information is available at:
http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_qu ality_control_planning/2012_sed/

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3.4.6 San Joaquin Fall Pulse Flows | **State Water Board**

Provide short-duration San Joaquin River pulse flows in the fall starting by 2015. | State Water Board

Progress Score: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Action 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for the San Joaquin River. However, this update to the Bay-Delta Plan does not include changes to the current requirements and operations for fall San Joaquin River pulse flows.

Additional information is available at:
http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/index.shtml

3.4.7 Delta Waterway Geometry | **Department of Fish and Wildlife**

Reconfigure Delta waterway geometry by 2015 to increase variability in estuarine circulation patterns. | CDFW, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Section 85302(e)

Status Description:

Water Code Section 85302(e): "The following subgoals and strategies for restoring a healthy ecosystem shall be included in the Delta Plan.... (4) Restore Delta flows and channels to support a healthy estuary and other ecosystems."

• Cross Channel gate operations are being managed under the OCAP Biological Opinions to avoid entrainment of Sacramento River salmonids into the central Delta.
• Two-Gates and the effectiveness of barges as barriers: IEP is conducting turbidity studies associated with early winter outflow to assess Delta smelt movement. A report on initial field investigations is in preparation. Additional field work is planned for winter 2012-2013. These studies are not assessing the effectiveness of flow control structures since none are in place or planned to be constructed with the abandonment of the Two Gates Project.
• DWR is testing a nonphysical barrier at Georgiana Slough. Reslts are pending.

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3.5.1a Wastewater Discharges | **Central Valley Regional Water Quality Control**

Require the Central Valley Regional Water Quality Control Board to immediately re-evaluate wastewater treatment plant discharges into Delta waterways and upstream rivers and set discharge requirements at levels that are fully protective of human health and ecosystem needs.

Central Valley Regional Board

Progress Score: 3 **Enacting Legislation:**

Status Description:

Enforcement Activity. The Central Valley Board uses the National Pollutant Discharge Elimination System (NPDES) to regulate all wastewater discharges into the Delta and tributaries to the Delta. Two regulatory actions follow.

Sacramento Permit. On December 9, 2010 The Central Valley Regional Board issued a new NPDES permit to the Sacramento Regional County Sanitation District (SRCSD), which operates the largest wastewater discharger in the Delta, discharging 14 tons of ammonia/ammonium per day. The new permit imposes new ammonia effluent limits and requires tertiary treatment and nitrogen removal. In April 2013, SRCSD and the Central Valley Regional Board settled a challenge to the permit requirements regarding ammonia and nitrates. SRCSD will be implementing treatment plant upgrades over the next 10 years.

Stockton Upgrade. The Stockton Regional Wastewater Control Facility (WWCF) has been upgraded over the last decade to include treatment processes for ammonia. The upgraded facility is significantly reducing ammonia in the treated effluent (per the USEPA Unabridged Advance Notice of Proposed Rulemaking: Water Quality Challenges in the San Francisco Bay/Sacramento-San Joaquin Delta. February, 2011, pages 27-29). The City of Stockton declared bankruptcy on April 2, 2013, in part to discharge a $4 million settlement for past WWTC violations of the federal Clean Water Act. The suit, brought by the California Sportfishing Protection Alliance, claimed that there were 1,530 sewer overflows during the previous five years by the WWCF.

CV-SALTS. Many city or regional wastewater facilities in the Central Valley cannot meet current Basin Plan requirements because of levels of salinity and nitrates found in their wastewater treatment plant discharges. In 2006, the Central Valley Regional Board, the State Water Board, private landowners, and municipal stakeholders formed a coalition called the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). The group is evaluating water quality objectives and contaminant sources to support a Basin Plan Amendment in June 2014, which could lead to new discharge requirements for all water bodies within the Sacramento River Basin—including, among others, discharges from wastewater treatment plants.

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3.5.1b Irrigated Agricultural Lands Discharges | **Central Valley Regional Water Quality Control**

Require the Central Valley Regional Water Quality Control Board to adopt by 2010 a long-term program to regulate discharges from irrigated agricultural lands. | CVWRCB

Progress Score: 3 **Enacting Legislation:**

Status Description:

Long-Term Irrigated Lands Regulatory Program. The current Long Term Irrigated Lands Regulatory Program (ILRP), which became final December 12, 2012, sets limits on discharges within the jurisdiction of the Central Valley Regional Board. The Central Valley Regional Board currently implements the ILRP limits on discharges from irrigated lands (e.g. tailwater, water from underground drains, stormwater runoff) to waters of the State by way of the "Conditional Waiver of Waste Discharge Requirements" (Conditional Waiver). The Conditional Waiver regulations mandate that if waiver holder has had two or more exceedances of the same pollutant at the same site within a three-year period, they must prepare and implement a formal Management Plan to control the pollutants.

Grower Coalitions. The Conditional Waiver program, operated under the Long Term ILRP, requires that farmers: (1) form grower Coalition Groups; (2) prepare and implement Monitoring and Reporting Program (MRP) plans; and (3) submit periodic monitoring reports and data. Of the estimated 35,000 growers in the Central Valley, there are about 25,000 landowners/operators, with a total of nearly 5 million acres of land, which are currently regulated by the Central Water Board and are part of Coalition Groups. Growers who do not join a coalition will be directly regulated by the Central Valley Water Board, and will be subject to higher costs.

Beneficial Use Of Agricultural Water Bodies. In October 2011, the Central Valley Water Board reviewed beneficial use designations in agriculturally dominated water bodies and streams. A draft workplan was approved in December 2011. A February 2013 staff update identified 160 natural water bodies in which agricultural drainage or supply water dominates to the point that these rivers, lakes or streams may be unfit for beneficial use as drinking water or habitat for fish and wildlife.

New Waste Discharge Requirements. On December 13, 2012, the Central Valley Board announced new waste discharge requirements (WDR) to protect ground and surface water from irrigated agricultural discharges by farmers in the Eastern San Joaquin River Watershed who are part of a Coalition Group. On March 27, 2013, informed by the beneficial use staff report (above), the Central Valley Board issued a revised WDR implementation schedule:

- General Waste Discharge Requirements for Individuals, May 31, 2013
- Tulare Lake Basin, June 21, 2013
- Grasslands Bypass, June 21, 2013
- San Joaquin County and Delta, October 2013
- Sacramento Valley Rice Growers, October 2013
- Sacramento River Watershed, December 2013
- Westlands Water District, December 2013
- West-side San Joaquin River, December 2013

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USDA's EQIP Program. In March 2012 the USDA's Natural Resources Conservation Service (NRCS) announced four new focus areas where $8.5 million will be made available through the Environmental Quality Incentives Program (EQIP). EQIP grants will help producers undertake water quality and water conservation projects. The four areas to be targeted for water quality/water conservation include:

- Walker Creek portion of the Colusa-Glenn subwatershed in Glenn County.
- Lower Snake River in Sutter County.
- French Camp Slough Watersheds in San Joaquin and Stanislaus counties.
- Eastern portion of the San Joaquin River watershed in Stanislaus and Merced counties.

These watercourses were chosen because of their 2011 exceedances for organophosphate pesticides, potentially resulting in a Clean Water Act (CWA) 303d listing as impaired for beneficial uses.

USDA NRCS Grants . In January 2013, the USDA NRCS in California announced that $5 million is available to farmers and dairy producers east of the San Joaquin River in Merced and Stanislaus counties for water conservation and water quality improvements. The NRCS is also providing approximately $1.5 million to farmers that implement water quality and irrigation efficiency practices in selected San Joaquin County watersheds. California agricultural producers who are certified organic or transitioning to organic production are being given technical and financial assistance through a national organic initiative administered by the NRCS.

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3.5.1c Urban Runoff | **Central Valley Regional Water Quality Control**

Require the Central Valley Regional Water Quality Control Board to review by 2012 the impacts of urban runoff on Delta water quality and adopt a plan to reduce or eliminate those impacts. | Central Valley Regional Board

Progress Score: 2 **Enacting Legislation:**

Status Description:

Stormwater Permits, Medium and Large Cities. Phase I National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permits regulate the storm water discharges from municipalities with a population of 100,000 or more (Sacramento, Stockton and Contra Costa County, as well as other cities in the Central Valley). These permits are reviewed and updated on a five year schedule. The permits require the municipalities to incorporate best management practices and control measures in their storm water management program to address specific pollutants of concern and identify sources of pollutants to protect beneficial uses of the receiving waters. Each of the municipalities has its own Regional Board endorsed plan to insure that their discharges don't have adverse impacts.

Stormwater Permits, Small Communities. The SWRCB updated the statewide general NPDES permit (Phase II) that regulates storm water discharges from smaller communities. The Phase II permit covers municipalities with a population less that 100,000 and includes military bases, prisons and university campuses. On February 5, 2013, the State Water Board adopted the final Phase II Small MS4 General Permit, which will become effective on July 1, 2013.

Drinking Water Policy. California's Central Valley watershed is 40 percent of the land area in California, provides more than half of the managed water supply, and contains three-quarters of the irrigated agriculture in California. Urban runoff, treated wastewater effluent, and agricultural practices discharge constituents that have the potential to affect downstream drinking water treatment facilities. In response to these issues, the Central Valley Regional Board, in July 2010, adopted Resolution No. R5-2010-0079 directing staff to establish a drinking water policy for the Sacramento-San Joaquin Delta and upstream tributaries.

Workgroup. As part of this effort, the Water Board established a Central Valley Drinking Water Policy Workgroup (Workgroup) consisting of various stakeholders from the agricultural, urban runoff, wastewater, and drinking water supply communities and State and federal agencies. Technical studies included urban runoff source evaluation and development of a comprehensive analytical model. Workgroup results were published on March 23, 2011 in the "Urban Runoff Source Control Evaluation for Central Valley Drinking Water Policy." The report was finalized in February 2012.

WQCP Amendment to the Basin Plan. In February 2013, the Central Valley Regional Board issued a Draft Staff Report entitled "Amendment To the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins To Establish a Drinking Water Policy for Surface Waters of the Sacramento-San Joaquin Delta and Upstream Tributaries (Staff Report)." The Staff Report provides the rationale and supporting documentation for a proposed amendment to the "Water Quality Control Plan for the Sacramento and San Joaquin River Basin (Basin Plan)." The amendment will add a Drinking Water Policy and a narrative water quality objective for chemical constituents of concern. The Central Valley Regional Board announced on March 25, 2013 that it would consider adoption of the proposed policy in July 2013. All the documents discussed above are available on the Drinking Water Policy website: http://www.waterboards.ca.gov/centralvalley/water_issues/drinking_water_policy/

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3.5.2 Drinking Water Intake Relocation | **Department of Water Resources**

Relocate as many Delta drinking water intakes as feasible away from sensitive habitats and to channels where water quality is higher. | DWR and local water agencies

Progress Score: 4 **Enacting Legislation:**

Status Description:

Contra Costa Water District - CCWD completed its Alternate Intake Project in July 2010 (Near-term Action #5).

City of Stockton Water Project. - The initial phase of the City of Stockton Delta Water Project is complete. The project will initially divert and treat 30 million gallons per day (mgd) from the San Joaquin River on Empire Tract. This water will serve approximately one-third of Stockton's water needs. At full capacity (2050), the plant can treat 160 mgd.

North Bay Aqueduct - DWR has proposed to implement the North Bay Aqueduct Alternate Intake Project (NBA AIP) to improve water quality and to provide reliable deliveries of State Water Project (SWP) supplies to its contractors, the Solano County Water Agency (SCWA) and the Napa County Flood Control and Water Conservation District (Napa County FC&WCD). Public Scoping for the EIR was completed in January 2010. The Draft EIR has been postponed until late 2013 to allow time to coordinate water quality analysis and modeling with the ongoing BDCP analysisis expected in late 2012.

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3.5.3 Mercury TMDL Programs | **Central Valley Regional Water Quality Control**

Establish Total Maximum Daily Load programs by 2012 for upstream areas to reduce organic and inorganic mercury entering the Delta from tributary watersheds.

Central Valley Regional Board

Progress Score: 3 **Enacting Legislation:**

Status Description:

Mercury TMDLs. TMDL programs are complete for the Cache Creek watershed, Bear Creek, and Harley Gulch. These watersheds are major contributors of inorganic mercury to the Delta. Implementation work is underway to reduce mercury loading from these watersheds.

Basin Plan Amendment. In October 2011 the U.S. EPA approved the Regional Board TMDL and Basin Plan amendment for the control of mercury and methylmercury in the Delta estuary. The amendment assigns mercury allocations to the Delta tributaries. Currently, point sources (wastewater treatment plans and urban stormwater runoff) and non-point sources (irrigated agriculture, wetland managers, and state and federal agencies) are collaborating on developing and implementing methylmercury control studies to develop and evaluate best management practices to reduce methylmercury levels.

Data Sets. Central Valley Regional Board staff, in coordination with State Water Board staff and USEPA, has been working to assess the data submitted by interested parties. More than 250 individual data sets, covering more than 20,000 individual waterbody pollutant combinations and over 150,000 sample points, were received from sources including government agencies, municipalities, environmental groups, citizen groups, and National Pollutant Discharge Elimination System dischargers.

Impaired Reservoirs. Staff from a number of regions are developing statewide mercury TMDLs for 74 of the state's reservoirs impaired by mercury. State Water Board staff is developing statewide mercury objectives. Both of these projects are intended to decrease mercury discharges to surface waters, including tributaries of the Delta. Staff continues to work on the assessment of the data in order to create an accurate and scientifically defensible report. State Water Board staff anticipates that the data assessment work will be completed and available for Regional Board public review by the end of 2013 or early 2014.

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3.5.4 Comprehensive Delta Monitoring | **Central Valley Regional Water Quality Control**

Begin comprehensive monitoring of water quality and Delta fish and wildlife health in 2009. | ISB, IEP, State Water Board, Delta Science Program, USGS, CDFW

Progress Score: 4 **Enacting Legislation:**

Status Description:

Water Quality Monitoring. Numerous agencies and programs are collecting data related to water quality and Delta fish and wildlife health. These agencies include the State Water Board, Central Valley Regional Board, DWR (through Municipal Water Quality Investigations), the Interagency Ecological Program (IEP), and CDFW. The regulatory drivers are the federal Clean Water Act, the National Endangered Species Act, the Porter Cologne Water Quality Control Act, and the California Endangered Species Act.

Delta Data Monitoring. In June 2010 the State Water Board, Central Valley Regional Board, and San Francisco Bay Regional Board adopted the "Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary." It outlines a comprehensive data-monitoring program for the Delta. The short-term (i.e., within 1-2 years) data-monitoring goal is to establish a framework for regularly gathering, compiling, assessing, and reporting readily available data. The long-term goal (within 3-5 years) is to develop a Regional Monitoring Program for the Delta (Delta RMP).

Pulse of the Delta. In March 2012 the Delta RMP issued its second annual report, Pulse of the Delta: Linking Science & Management Delta through Regional Monitoring. The report is available at:
http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/comprehensive_monitoring_program/

California Environmental Data Exchange Network. The Surface Water Ambient Monitoring Program (SWAMP) database is a subset of the California Environmental Data Exchange Network (CEDEN) database (http://www.ceden.org). These data are accessible to stakeholders, and visually display water quality within selected watersheds. Next steps include comparing these data with other databases, and working with stakeholders to identify their expectations and needs. The Water Quality Monitoring Council is developing the Water Quality Portal for the Estuary. It will eventually be used to identify open issues with respect to water quality monitoring. The State Water Board recognizes the need to increase data access while also enhancing coordination among the various entities collecting water quality data. State Water Board staff is coordinating with a variety of organizations and agencies to make data available via CEDEN.

Central Valley Watershed Monitoring Directory. This directory was built to promote and facilitate improved coordination of water monitoring across the basin. The Monitoring Directory was developed with funding and participation from SWAMP and USEPA. The Central Valley Regional Board will continue to fund maintenance, updates, and upgrades for another year, while a long-term sustainability plan is being developed. Http://www.centralvalleymonitoring.org

Interagency Ecological Program (IEP). The IEP has been conducting cooperative ecological monitoring in the Bay-Delta since 1970. IEP agencies include CDFW, USGS, NMFS, DWR, USFWS, SWRCB, USACE, USBR, USEPA, and DSP. The IEP has the lead role in monitoring and studies required under the Federal Biological Opinions (OCAP) and the State water rights permit conditions for the delta operations of the CVP and SWP. In 2011, the IEP coordinated and tracked 144

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projects with a combined budget of $39 million. The IEP is coordinating with the Central Valley Regional Board (Stephanie Fong), CDFW (Gregg Erickson), DWR (Karen Gehrts), and others, to help the water board review and draft a comprehensive regional monitoring plan for the Delta.

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Evaluation Topic: 4 - Delta Vitality and Security

2.1.1 NHA Designation | **Delta Protection Commission**

Apply by 2010 for the designation of the Delta as a federally recognized National Heritage Area. | Resources, DPC

Progress Score: 3 **Enacting Legislation:** Water Code Section 85301(b)(1)

Status Description:

The 2009 water legislation directed the DPC to include in their proposed Delta protection plan to the DSC a plan for achieving state and federal special designation for the Delta. On February 4, 2013, U.S. Senators Dianne Feinstein and Barbara Boxer introduced the Sacramento-San Joaquin Delta Heritage Area Act, a bill that creates California's first National Heritage Area. The bill (S.228) will establish the Sacramento-San Joaquin Delta as a National Heritage Area, to be managed by the Delta Protection Commission. The goal of the National Heritage Area is to conserve and protect the Delta, its communities, its resources and its history. On March 7, 2013, Congressman John Garamendi with original cosponsors Representatives George Miller, Doris Matsui, Jerry McNerney, and Mike Thompson, along with Northern California County Supervisors, announced the introduction of the Sacramento-San Joaquin Delta National Heritage Area Establishment Act. The bill, H.R. 1004, is the identical House companion to S.228.

2.1.2 Delta Recreation Area | **Natural Resources Agency**

Expand by 2010 the State Recreation Area network in the Delta, combining existing and newly designated areas. | Resources, CDPR

Progress Score: 3 **Enacting Legislation:** Water Code Section 85301(c)(1)

Status Description:

The 2009 water legislation directed CDPR to prepare and submit to the DPC a proposal for expanding the Delta network of State recreation areas, combining existing and newly designated areas, and including any plans or concepts included in the Central Valley Vision Implementation Plan (CVVIP), a "catalog of potential initiatives," for Central Valley parks and recreation including the Delta. In April 2011, CDPR published its "Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh" (Recreation Proposal). It contains all the CVVIP plans and concepts as well as many other specific actions to expand the Delta network of recreational areas. The recommendations were incorporated into the DPC Economic Sustainability Plan and the Delta Plan. The Delta Plan includes seven recommendations regarding recreation in the Delta, including a recommendation to the CDPR to expand the recreation area in the Delta as funds become available. Other recommendations include direction to the DPC, the Delta Conservancy, CDFW, Boating and Waterways, cities, counties, water management agencies, and ecosystem restoration agencies to expand access, investment, opportunities, and cooperation.

State budget constraints have resulted in closure or hours curtailment for state parks in the Delta.

The National Association of Recreation Resource Planners (NARRP) presented its 2012 Excellence in Planning Award to CDPR for its Recreation Proposal.

The Recreation Proposal can be found at http://www.parks.ca.gov/pages/795/files/delta%20rec%20proposal_08_02_11.pdf

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2.2.1 Delta Agriculture Support | **Department of Food and Agriculture**

Establish special Delta designations within existing federal and state agricultural support programs. | CDFA, DPC, DC, USDA

Progress Score: 2 **Enacting Legislation:** Water Resources Code Section 85301(c)(2)

Status Description:

The 2009 water legislation directed CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture. On March 21, 2011, in accordance with the directive of the 2009 water legislation (SBX7-1), CDFA presented to the DPC and the DSC its evaluation of policy alternatives to benefit agriculture in the Delta. The report was prepared for CDFA by the University of California, Agricultural Issues Center. The report examined the potential for agritoursm, crop changes, biofuels, and ecotourim to expand the local agricultural economy. (See also Action 2.2.3, Delta Agricultural Markets.)

Conservation Partners. Conservation Partners is a partnership between the USDA's NRCS, the National Fish and Wildlife Foundation (NFWF) and other regional partners. The purpose of this program is to provide grants for technical assistance to farmers, ranchers, foresters and other private landowners to optimize wildlife habitat conservation on private lands. Conservation Partners looks to increase the effectiveness of Farm Bill assistance funded through programs such as Wildlife Habitat Incentives Program (WHIP), Environmental Quality Incentives Program (EQIP), Conservation Reserve Program (CRP) and others through technical assistance to private landowners in targeted Program Priority Areas (PPAs).

Bay Delta is a Priority Area. In 2011, the California Bay Delta region became one of the twelve conservation initiatives nationally designated by USDA's Natural Resources Conservation Service (NRCS) as a targeted PPA. As such, the region is eligible for accelerated assistance and funding to agricultural producers who seek to voluntarily restore and enhance the natural resources through water conservation, water quality work, and habitat restoration.

UDSA Provides Funds. In January 28, 2013 the USDA's NRCS in California announced that $1.5M is available to improve on-farm water resources in San Joaquin County. This funding is anticipated to help eligible farmers implement water quality and irrigation efficiency practices in selected San Joaquin County watersheds. This funding will also assist growers to reduce water losses on-farm, and to reduce nutrient, sediment and chemical loads at the edge of fields.

USDA Farmers' Market Program. The USDA's Farmers' Market Promotion Program awarded the Discover the Delta Foundation a $40,000 grant. The Delta Farmer's Market, owned and operated by the Discover the Delta Foundation, is the first phase of the larger Delta Discovery Center project on a five-acre site in Isleton near the intersection of highways 4 and 160. When completed, an 8000 square-foot educational center will include a model of the Delta, a wine tasting room, farmers' market, classrooms, and a museum showcasing the agricultural and cultural history of the region. Discover the Delta is a nonprofit entity whose mission is to promote, protect, and preserve the Delta by providing objective and science-based information so that the Delta can be better understood, enhanced, and enjoyed. One of its goals is to preserve and enhance the Delta's agricultural resources.

California Delta Road Sign Project. DPC and Other Agencies in partnership are implementing the California Delta Road Sign Project. The purpose of the project is to increase the awareness of the California Delta by erecting welcoming signs at road and highway entrances to the Delta. The project is funded by the Delta Protection Commission, Contra Costa County Board of Supervisors and Public Works Department, Sacramento County Board of Supervisors and Public Works

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Department, Solano County Board of Supervisors and Public Works Department, San Joaquin County Board of Supervisors and Public Works Department, Yolo County Board of Supervisors and Public Works Department and the California Department of Transportation.

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2.2.2 Agricultural Sustainability Research | **Department of Food and Agriculture**

Conduct needed research and development for agricultural sustainability in the Delta. | CDFA, DPC, USDA

Progress Score: 1 **Enacting Legislation:** Water Code Section 85301(c)(2)

Status Description:

The 2009 water legislation directed the CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture.

CFDA's Sustainability Priorities. CDFA's "California Agricultural Vision: Strategies For Sustainability" (December 2010) identified 12 key strategies that continue to guide the planning, design and implementation of all CDFA projects and programs:

1. Improve Access to Safe, Healthy Food for All Californians
2. Ease the Burden of Regulation on Agriculture While Maintaining Health, Safety and Environmental Standards
3. Secure an Adequate Supply of Water for Agricultural Purposes
4. Assure a Strong Labor Force through Fairness to Agricultural Workers and Employers
5. Effectively Detect, Exclude and Control Invasive Species
6. Adopt a Policy of Conserving Agricultural Land and Water Resources
7. Expand Environmental Stewardship on Farms and Ranches
8. Promote Renewable Energy & Substitutes for Fossil-Based Inputs
9. Assure Agricultural Adaptation to Climate Change
10. Promote Robust Regional Markets for All California Producers
11. Cultivate the Next Generation of Farmers and Ranchers
12. Promote Agricultural Research that Anticipates 21st Century Challenges

CDFA's Marketing Objectives. In January 2013, the CDFA released its "CDFA Strategic Plan: 2013-2018." Goal One is to promote and protect the diverse local and global marketability of the California agricultural brand, which represents superior quality, value, and safety. The strategies and objectives for Goal One include:

A. Strengthen CDFA's public outreach and awareness efforts for programs and activities that assist in the creation of new and the promotion of existing markets.
B. Partner with the University of California, Davis' Agriculture and Natural Resources Small Farm Program, Buy California Marketing Agreement, and organic food entities to promote California specialty crop products.
C. Open new markets, retain existing markets, and prevent disruption through data collection.'
D. Optimize local and global partnerships to promote California projects through education and cooperation.
E. Provide quarterly and annual reports online summarizing CDFA program updates, accomplishments and performance achievements.

UC-ANR Report Expected. The State Board of Food and Agriculture has asked the Agriculture & Natural Resources Division of the University of California (UC-

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ANR) to conduct a study of California's long-term agricultural land, water, and other resource needs, based on future demand for food, fiber, renewable energy, and ecosystem services, and on the influence of urbanization, water availability, climate change, energy costs, technology, and other factors on future agricultural productivity and production capacity. They are still working on this report which is due out in 2013.

Delta research publications by the Agriculture & Natural Resources Division of the University of California can be more easily accessed. Http://ucanr.edu/sites/deltacrops/

2.2.3 Delta Agricultural Markets — **Department of Food and Agriculture**

Establish new markets for innovative agricultural products and enterprises in the Delta. — CDFA, DPC, USDA

Progress Score: 1 **Enacting Legislation:** Water Code Section 85301(c)(2)

Status Description:

The 2009 water legislation (SBX7-1), directed CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture.

CDFA Policy Alternatives. In March 2011, the CDFA presented to the DPC and the DSC its report "Evaluations of Policy Alternatives to Benefit Agriculture in the Sacramento-San Joaquin Delta of California" written and researched by Daniel A. Sumner and John Thomas Rosen-Molina University of the California Agricultural Issues Center. The report examined the potential for agritoursm, crop changes, biofuels, and ecotourim to expand the local agricultural economy. The report found, among other conclusions, that additional public funds to support local marketing were likely to provide only limited additional revenue for Delta agriculture. Most Delta crops are not suited for local food markets and unless longer term environmental and infrastructure concerns are addressed, investments in permanent tree and vine crops or in local marketing infrastructure are unlikely to be economically feasible. Where there are regulatory barriers to production for local markets, local authorities should investigate rules to assure that untoward impediments that restrict growth of these markets are removed.

ESP Agricultural Recommendations. The DPC's March 2011 "Economic Sustainability Plan" (ESP) included important baseline information to protect and enhance Delta agricultural activity and productivity. ESP recommendations included:
1. Maintain and enhance the value of Delta agriculture. The potential of other industries to replace any loss in economic output from Delta agriculture is limited.
2. Limit the loss of productive farmland to urbanization, habitat, and flooding. Continuing shifts of Delta agriculture to higher-valued crops and more value-added activities will compensate if land loss is not too great.
3. Protect Delta water quality and water supplies for agriculture.
4. Support growth in agritourism. Agritourism is currently a very small contributor to the Delta's agricultural value, but is fast growing. Local area plans should support agritourism where appropriate.
5. Support local value-added processing of Delta crops. Regulations from local, state and federal agencies such as FEMA that inhibit investment in value-added processing should be examined and streamlined where possible.

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Actions Status by Evaluation Topic

Action # Action Name Action Description	State Lead Other Responsible Organizations
2.3.1 Delta Economic Development Plan *Charge the Delta Protection Commission with facilitating a consortium of local governments to create a regional economic development plan that addresses agriculture, recreation, tourism, and other innovative land uses.*	**Delta Protection Commission** Governor and Legislature, DPC, Local Governments

Progress Score: 3 **Enacting Legislation:** Public Resources Code Section 29759

Status Description:

The DPC's Economic Sustainability Plan for the Sacramento-San Joaquin Delta (ESP) was approved by the DSC and incorporated into the Delta Plan in 2012.

The ESP made recommendations in four areas:

1. Public safety recommendations, such as flood protection.
2. Economic goals, policies, and objectives in local general plans and other local economic efforts, including recommendations on continued socioeconomic sustainability of agriculture and its infrastructure and legacy communities in the Delta.
3. Comments and recommendation to the Department of Water Resources concerning its periodic update of the flood management plan for the Delta.
4. Identification of ways to encourage recreational investment along key river corridors.

The Legislature has not yet committed resources for implementing the plan.

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2.3.2 Delta Enterprise Zones

Office of Planning and Research

Establish special enterprise zones at the major "gateways" to the Delta as part of the economic development plan.

OPR, Local Governments, Legislature and Governor

Progress Score: 3 **Enacting Legislation:**

Status Description:

The Delta Plan notes that DPC and California State Parks foresee opportunities to improve and increase recreation and tourism in the Delta. Both agencies recommend improvements of "gateways" to the region on the Delta's urban edges, and "base camps" inside the Delta at destinations such as resorts, Legacy Communities, or parks that are focal points for visitors.

Enterprise zones were initially targeted for elimination in the 2011-12 state budget, but all 42 existing zones survived the cuts. The Brown administration asked for a change in the rules for claiming tax credits; companies would be limited to applying within one year of hiring an eligible employee, instead of the current four.

Much of the Delta is already in Enterprise Zones, with enterprise zones for San Joaquin County, Sacramento, and Pittsburg. The San Joaquin County Enterprise Zone is the largest in the state, covering Stockton, Lodi, Tracy, Lathrop, and Manteca. The zone encompasses approximately 656 square miles with over 55 square miles of commercial and industrial properties. More than 98% of existing commercial/industrial locations are in the zonal boundaries. The designation was due to expire in 2013 but was extended to 2023. More than 1,016 San Joaquin County businesses received approved Hiring Tax Credit Vouchers, with 11,090 new employees hired. (San Joaquin Partnership & Business Council, Inc. March 28, 2013.)

The new Sacramento Enterprise Zone received its final designation January 12, 2012, and has an expiration date of 2024. On April 10, 2012, Housing and Community Development issued a final Enterprise Zone designation to Pittsburg, adjacent to the Delta, with an expiration date of 2027.

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2.4.1 Delta Investment Fund | **Legislature**

Initiate the Delta Investment Fund with state funding. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The 2009 water legislation established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with DSC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000.

The Legislature has not provided any additional funds for Delta investment. In 2011 and 2012, the DPC and Delta Conservancy relied on funds from other sources to complete planning work. The DPC received funding from the Environmental License Plate Fund and the Harbors and Watercraft Fund. Additionally, funding strategies from various foundations was used for the following projects: NHA Phase II Feasibility Study, The Great California Delta Trail, and Delta Working Landscapes. The Delta Conservancy borrowed funds from the DSC to complete the strategic plan and received foundation grant funds to continue outreach and coordination.

2.4.2 Delta Investment Fund Structure | **Legislature**

Structure the Delta Investment Fund so that it can accept revenues from federal, state, local, and private sources. | Governor and Legislature

Progress Score: 10 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The Legislature established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with DSC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000.

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2.4.3 Delta Investment Fund Management | **Delta Protection Commission**

Place the Fund under the joint management of the Delta Protection Commission and a consortium of local governments. | Governor and Legislature

Progress Score: 3 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The Legislature established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with the DPC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000. The Fund is subject to appropriation by the Legislature to the DPC. The restructuring of the DPC incorporates local government into the management of the Delta Investment Fund.

The Legislature has not provided any additional funds for Delta investment. In 2011 and 2012, the DPC and Delta Conservancy relied on funds from other sources to complete planning work. The DPC received funding from the Environmental License Plate Fund and the Harbors and Watercraft Fund. Additionally, funding strategies from various foundations was used for the following projects: NHA Phase II Feasibility Study, The Great California Delta Trail, and Delta Working Landscapes. The Delta Conservancy borrowed funds from the DSC to complete the strategic plan and received foundation grant funds to continue outreach and coordination.

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6.1.1 Delta Emergency Response Plan | **Emergency Management Agency**

Complete a Delta-wide regional emergency response plan by 2010 that establishes legally binding regional coordination. | Cal EMA, DPC, DWR, and Local Governments

Progress Score: 3 **Enacting Legislation:** Water Code Section 12994.5 and Water Code Section 85305

Status Description:

Multi-Hazard Coordination Task Force. SB 27, the Sacramento – San Joaquin Delta Emergency Preparedness Act of 2008 (Water Code Section 12994.5), directed Cal-EMA to form the SB 27 Task Force, which includes DPC, DWR, and a representative of each of the five Delta counties, to prepare a Multi-Hazard Plan for the Delta. The "Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report (SB 27 Task Force Report)" was approved for release on May 9, 2012. Its scope includes all of the activities of Actions 6.1.1, 6.1.2, 6.1.3, 6.1.4, and 6.1.5. As required, the SB 27 Task Force Report covers the following three topics:

(1) Makes recommendations to the Cal EMA relating to the creation of an interagency unified command system organizational framework, in accordance with the guidelines of the National Incident Management System and the Standardized Emergency Management System.
(2) Coordinates the development of a draft emergency preparedness and response strategy for the Delta region, for submission to the Secretary of Cal EMA. Where possible, the strategy utilizes existing interagency plans and planning processes of the involved jurisdictions and agencies that are members of the DPC.
(3) Develops and conducts an all-hazard emergency response exercise in the Delta, designed to test regional coordination protocols already in place.

Per Section 12994.5(d), the SB 27 Task Force ceased to exist on the date that the report was submitted. The main elements of the SB27 Task Force Report were incorporated into the Delta Plan. As part of the Delta Plan, the DSC recommended formation of a regional emergency response organization for the Delta. The work of the task force has continued through quarterly meetings of the Delta Working Group, which includes federal, state, and county emergency managers, reclamation districts, DSC, DPC, and other emergency managers.

Catastrophic Flood Incident Plan. Cal-EMA and FEMA are leading the effort to develop the Northern California Catastrophic Flood Incident Plan, which will be completed in fall 2013.

Emergency Communications Planning. DPC received a $5 million DWR grant to plan and implement improved Delta emergency communications and coordination among the five counties, state, and federal response planners.

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6.1.2 Emergency Management Actions | **Emergency Management Agency**

Immediately begin a comprehensive series of emergency management and preparation actions. | Cal EMA, DPC, DWR, and Local Governments

Progress Score: 3 **Enacting Legislation:** Water Code Sections 12994.5 and 85305

Status Description:

Delta Vision Strategic Plan Action 6.1.2 proscribes 14 recommended Delta emergency management activities to be undertaken by DWR, Cal EMA, the Delta counties' Flood Response Group, the Army Corps, DOD, FEMA, and the Coast Guard.

SB27 Task Force Report. The Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report (Task Force Report) was approved for release on May 9, 2012. Its scope includes all of the activities in Actions 6.1.1, 6.1.2, 6.1.3, 6.1.4, and 6.1.5.

Golden Guardian Emergency Exercises. One of the important activities recommended was to conduct an emergency exercise in the Delta. A Golden Guardian Statewide Exercise Series (GG11) was held May 17, 18, and 19, 2011. The exercise focused on California's strategy in preparing for, responding to, and recovering from a catastrophic flood in the Inland Delta Region. Detailed information is restricted to those with security clearances for the exercise. The Golden Guardian 2013 Exercise Series theme was a major earthquake in the San Francisco Bay Area.

Emergency Resources. DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. To date, DWR has stockpiled 485,000 sandbags, 9.5-miles of plastic, 2,800-rolls of twine, 72,000 stakes, 250,000 buttons, 12 roll-off containers, 225,000-tons of rock. DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Land leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

Catastrophic Flood Plan. Cal EMA and FEMA have initiated a Catastrophic Delta Flood Plan, which will be completed in fall 2013.

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6.1.3 Highway Protection Strategies | **Department of Transportation**

Conduct a comprehensive analysis of the costs and benefits of highway protection strategies, and adopt a policy based on its findings by 2012. | Caltrans, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Section 85307(c)

Status Description:

The 2009 water legislation suggests that the DSC, "...in consultation with the Department of Transportation, may address in the Delta Plan the effects of climate change and sea level rise on the three State highways that cross the Delta." Caltrans provided comments to the DSC for the Delta Plan.

Caltrans Assessment Reports. Caltrans has completed the following statewide assessment and guidance reports:
- "Vulnerability of Transportation Systems to Sea Level Rise, Preliminary Assessment (2009)," which assesses the vulnerability of the State's transportation system to sea level rise due to climate change.
- "Guidance on Incorporating Sea Level Rise," which analyzed the costs and benefits of highway protection strategies (May 2011), which sets forth the methodologies to be followed to determine and justify whether and to what extent mitigation for sea-level rise is applicable to specific projects.
- "Caltrans Activities to Address Climate Change Reducing Greenhouse Gas Emissions and Adapting to Impacts" (April 2013), which provides an overview of Caltrans activities to reduce GHG emissions and adapt the state's transportation system for the impacts of climate change. The report says that as of 2009, approximately 1,900 miles of California's roadways were at risk of a 100-year flood event; projected sea level rise of 55 inches would increase the roadway at risk to approximately 3,500 miles.

State Route 12. In November 2012 Caltrans published its "SR-12 Comprehensive Evaluation and Corridor Management Plan (Comprehensive Evaluation)."The Comprehensive Evaluation found that nearly the entire corridor is subject to the threat of natural impacts including sea-level rise and the area critically depends on its more than 1,000 miles of levees for protection. Projected impacts of sea level rise would inundate Delta areas west of Rio Vista including Suisun City, Fairfield, and segments of SR-12 between Rio Vista and the I-5 interchange and access to the Travis Air Force Base. Also, because water courses in the area are subject to tidal conditions, sea-level rise could exacerbate flood hazards. Sea-level rise, unless mitigated, is also expected to inundate the Delta areas of Sacramento County and San Joaquin County.

State Route 160. As a first step in developing a SR-160 Corridor Management Plan (CMP), the "Transportation Concept Report for SR-160" was issued August 29, 2011. The Plan notes that, according to the 2009 "Vulnerability of Transportation Systems to Sea Level Rise Preliminary Assessment," the SR-160 Delta corridor is most likely to be affected by an expected 55-inch rise in the sea level by 2100. Caltrans' stated intent is to assess SR-160 project vulnerability in its CMP and reduce anticipated risks associated with sea level rise. No CMP for SR-16- has been issued.

State Route 4. The "Corridor System Management Plan for State Route (SR) 4" (October 25, 2010) did not include a discussion of sea level rise.

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6.1.4 Infrastructure Protection Strategies | **Delta Stewardship Council**

Complete a comprehensive analysis of the costs and benefits of infrastructure protection strategies. Adopt a policy based on its findings by 2012. | BTH, CPUC, ERCDC, CVFPB

Progress Score: 1 **Enacting Legislation:** Water Code Section 85307

Status Description:

The 2009 water legislation suggests that the DSC, "...in consultation with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission, may incorporate into the Delta Plan additional actions to address the needs of Delta energy development, energy storage, and energy transmission and distribution." The Delta Plan includes recommendation DP R19, Plan for Delta Energy Facilities: The Energy Commission and Public Utilities Commission should cooperate with the Delta Stewardship Council as described in Water Code section 85307(d) to identify actions that should be incorporated in the Delta Plan by 2017 to address the needs of Delta energy development, storage, and distribution.

The Final Staff Draft Delta Plan describes a process to prioritize levee investments to protect Delta infrastructure. The proposed process would include an "economics-based risk analysis" for Delta islands that would consider the value of protecting infrastructure, land uses, and people in the Delta. The Delta Plan includes the following policy and recommendation related to analyzing the costs and benefits of infrastructure protection strategies (See also 6.3.1, Delta Levee Investment Strategy.):

- RR P1 Prioritization of State Investments in Delta Levees and Risk Reduction: The Delta Stewardship Council, in consultation with the Department of Water Resources, the Central Valley Flood Protection Board, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- DP R6 Plan for State Highways: The Delta Stewardship Council, as part of the prioritization of State levee investments called for in RR P1, should consult with the California Department of Transportation as provided in Water Code section 85307(c) to consider the effects of flood hazards and sea level rise on State highways in the Delta.

- RR R3 Fund Actions to Protect Infrastructure from Flooding and Other Natural Disasters: The CPUC should immediately commence formal hearings to impose a reasonable fee for flood and disaster prevention on regulated privately owned utilities with facilities located in the Delta…. The CPUC should direct all regulated public utilities in their jurisdiction to immediately take steps to protect their facilities in the Delta from the consequences of a catastrophic failure of levees in the Delta, in order to minimize the impact on the State's economy…. The Governor, by Executive Order, should direct State agencies with projects or infrastructure in the Delta to set aside a reasonable amount of funding to pay for flood protection and disaster prevention. The local share of these funds should be allocated as described above.

The Central Valley Flood Protection Act of 2008 directed DWR to prepare the Central Valley Flood Protection Plan (CVFPP). The CVFPP is a flood management planning effort that addresses flood risks and ecosystem restoration opportunities in an integrated manner. It specifically proposes a system wide approach to flood management for the areas currently protected by facilities of the State Plan of Flood Control (SPFC). Approximately two-thirds of the Delta levees are

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not included in the SPFC. The CVFPP considers impacts to areas of the Delta not covered by the SPFC and does not include an analysis of the costs and benefits of infrastructure protection strategies in these areas.

6.2.1 South Delta Land Use Oversight | **Delta Protection Commission**

Immediately strengthen land use oversight of the Cosumnes/Mokelumne floodway and the San Joaquin/South Delta lowlands. | Legislature, DPC

Progress Score: 2 **Enacting Legislation:** Public Resources Code Section 29773.5

Status Description:

The 2009 water legislation directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta. In December 2010, the DPC completed the "Sacramento San Joaquin Delta Primary Zone Study," which recommended that the Cosumnes/Mokelumne River Central, Bethel Island and Andrus/Brannan Island be redesignated as part of the Primary Zone and that the area within the City of Rio Vista city limits be changed from the Primary Zone to Secondary Zone. However, following completion of the Economic Sustainability Plan, the DPC recommended no changes to the Primary Zone or additional land use oversight for these areas.

The Delta Plan includes policies to protect floodplains and prevent encroachment in the Cosumnes River-Mokelumne River Confluence, as defined by the North Delta Flood Control and Ecosystem Restoration Project (McCormack-Williamson), or in the Lower San Joaquin River Floodplain Bypass, as described in the Lower San Joaquin River Floodplain Bypass Proposal.

6.2.2 Central Delta Land Use Oversight | **Delta Protection Commission**

Immediately strengthen land use oversight for Bethel Island, the city of Isleton, and Brannan-Andrus Island. | Legislature, DPC

Progress Score: 2 **Enacting Legislation:** Public Resources Code Section 29773.5

Status Description:

The 2009 water legislation directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta. In December 2010, the DPC completed the "Sacramento San Joaquin Delta Primary Zone Study," which recommended that the Cosumnes/Mokelumne River Central, Bethel Island and Andrus/Brannan Island be redesignated as part of the Primary Zone and that the area within the City of Rio Vista city limits be changed from the Primary Zone to Secondary Zone. However, following completion of the Economic Sustainability Plan, the DPC recommended no changes to the Primary Zone or additional land use oversight for these areas. The Delta Plan limits new urban development in many areas of the Delta. Regarding Bethel Island, the Delta Plan requires any new development on the island be consistent with the Contra Costa County General Plan.

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Action # Action Name Action Description	State Lead Other Responsible Organizations
6.2.3 Delta At-Risk Lands Plans *Immediately prepare local plans for these five at-risk locations within the primary zone: Walnut Grove (including the residential area on Grand Island), Locke, Clarksburg, Courtland, and Terminous.*	**Delta Protection Commission** DPC, DWR, Local Governments, CVFPB, USACOE

Progress Score: 1 **Enacting Legislation:**

Status Description:

Local plans have not been prepared.

Because all of these communities are protected in whole or in part by project levees, they are included in the Central Valley Flood Protection Plan (approved June 2012). The follow-on regional plans will address specific actions to improve protection for these communities.

DWR has provided funds to Delta Reclamation Districts to prepare 5-year levee plans. DWR is also providing funds for improvements to non-project levees in the Delta according to establish grant guidelines that consider: (1) levee improvements; (2) habitat improvements; and (3) acquisition of habitat credits.

Each of these five areas is included in the respective county Hazard Mitigation Plan. The USACOE has prepared a map book of levees, which has helped DWR identify technical information needs for these five areas. DWR Emergency Response is coordinating with these communities to identify additional technical data to inform emergency response planning and action. Specific flood protection plans for these areas have not been completed.

The Delta Plan added land use oversight for Walnut Grove (including the residential area on Grand Island), Locke, Clarksburg, Courtland, and Terminous.

DPC Primary Zone Study Policy #5 also addresses this issue indirectly. Policy #5 says that local general plans have to add criteria for evaluation of general plan amendments under Public Resources Code Section 29763.5. (PRC Section 29763.5 lists 11 eco-friendly requirements.) This implies that these five towns have to have general plans in place.

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6.2.4 Delta Land Use Consortium | **Department of Water Resources**

Immediately form a landowner consortium to create a new land use strategy that fosters recreation, increases habitat, reverses subsidence, sequesters carbon, improves handling of dredged material, and continues appropriate agriculture on Sherman, Twitchell, and Jersey Islands.

DWR, Local Agencies

Progress Score: 2 **Enacting Legislation:**

Status Description:

DWR is working with local Reclamation Districts on Sherman, Twitchell, and Jersey islands to implement several projects in habitat enhancement, subsidence reversal, carbon sequestration, and dredged material reuse. DWR is using these projects to develop project protocols for carbon credits that comply with California's cap-and-trade program.

To date, results show that rice farming can increase soil levels approximately 2" per year. Several hundred acres are managed to reverse subsidence and sequester carbon. There are approximately 12,000 acres available on Sherman and Twitchell islands.

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6.3.1 Delta Levee Investment Plan | **Delta Stewardship Council**

Require the Department of Water Resources, in cooperation with local Reclamation Districts and other agencies, to develop a comprehensive plan for Delta levee investments.

Governor and Legislature, Resources, DSC, DWR, CVFPB, Others

Progress Score: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation requires the DSC, in consultation with CVFPB, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees. The Delta Plan includes the following policy and recommendation:

- RR P1 Prioritization of State Investments in Delta Levees and Risk Reduction: The Delta Stewardship Council, in consultation with the DWR, the CVFPB, the DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- RR R2 Finance Local Flood Management Activities: The Legislature should create a Delta Flood Risk Management Assessment District with fee assessment authority (including over State infrastructure) to provide adequate flood control protection and emergency response for the regional benefit of all beneficiaries, including landowners, infrastructure owners, and other entities that benefit from the maintenance and improvement of Delta levees, such as water users who rely on the levees to protect water quality.

This district should be authorized to:
- Identify and assess all beneficiaries of Delta flood protection facilities.
- Develop, fund, and implement a regional plan of flood management for both Project and non-project levees of the Delta, including the maintenance and improvement of levees, in cooperation with the existing reclamation districts, cities, counties, and owners of infrastructure and other interests protected by the levees.

The Delta Plan added important details. Improvement of non-project levees to the FEMA Hazard Mitigation Plan (HMP) standard can now be funded without justification of the benefits. Improvement to a standard above HMP, such as PL 84-99*, may be funded as befits the benefits to be provided, consistent with the DWR's current practices and any future adopted investment strategy (islands planned for ecosystem restoration are not included.) (RR P1).

*The PL 84-99 standard is a minimum requirement established by USACE for levees that participate in its Rehabilitation and Inspection Program (33 United States Code 701n) (69 Stat. 186).

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6.3.2 Levee Bond Fund Priorities | **Delta Stewardship Council**

Prioritize the $750 million appropriated by Proposition 1E and Proposition 84 funds for the improvement of Delta levees, including in legacy towns. | DWR, CVFPB, CWC

Progress Score: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation requires the DSC, in consultation with CVFPB, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees.

DWR submitted "A Framework for Department of Water Resources Investment in Delta Integrated Flood Management in February 2011. DWR expects to finalize the Framework by the end of 2012.

In the Delta Plan, the DSC established a policy that "the Delta Stewardship Council, in consultation with DWR, the CVFPB, DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015. These priorities shall be consistent with the provisions of the Delta Reform Act in promoting effective, prioritized strategic State investments in levee operations, maintenance, and improvements in the Delta for both levees that are a part of the State Plan of Flood Control and non-project levees."

According to Delta Plan Chapter 8, page 304, Propositions 84 and 1E have provided substantial public financing toward most recent Delta levee projects. The Delta Levees System Integrity Program receives funding from both Propositions 1E and 84. This program consists of two programs, the Delta Levees Subvention Program and the Special Projects Program. These two programs provide State-matching funds for maintaining and improving Delta levees.

Delta Plan Table 8-1 summarizes the current balances for general obligation bonds by individual bond act related to water, ecosystem restoration, and flood protection. The statute generally dictates the specific types of projects or programs on which funds can be spent. Table 8-3 "Annual State and Federal Expenditures in California by Program Element (2012-13) shows that the anticipated Risk Reduction/Levee Integrity expenditures are $54,509,231 ($8,949,231 from the State and $45,560,000 from the federal government).

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Actions Status by Evaluation Topic

Action #	Action Name / Action Description	State Lead / Other Responsible Organizations
6.3.3	**Delta Levees Classification Table** *Require those preparing the comprehensive levee plan to incorporate the Delta Levees Classification Table to ensure consistency between levee designs and the uses of land and water enabled by those levees.*	**Delta Stewardship Council** Governor and Legislature, Resources, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:**

Status Description:

The DVSP recommendations with respect to Action 6.3.3 had been satisfied in the earlier versions of the Delta Plan. The four levee standards and guidance applicable to the Delta were discussed and illustrated in the Final (Sixth) Staff Draft Delta Plan (5/14/12); they were ordered from highest to lowest level of flood protection, although no particular standard was recommended. Prior versions of the Delta Plan mandated that investment priorities be set in accordance with the Levee Classifications based on Land Uses Table. The DSC removed the Delta Levees Classification Table that had been included in earlier drafts. These sections have now been replaced with the levee investment priorities process in RR P1, including near-term priorities.

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6.3.4 Levee Subventions Program | **Department of Water Resources**

Continue the existing Department of Water Resources levee subventions program until the comprehensive levee plan is completed. | DWR, CVFPB

Progress Score: 3 **Enacting Legislation:** Water Code Sections 12980 through 12995

Status Description:

Subventions. The Delta Levees Maintenance Subventions Program is a cost share program that provides technical and financial assistance to local levee maintaining agencies in the Delta for the maintenance and rehabilitation of nonproject and eligible project levees. The Subventions Program is authorized by California Water Code Sections 12980 through 12995 and is managed by DWR. The CVFPB reviews and approves DWR's recommendations and enters into agreements with local agencies to reimburse eligible costs of levee maintenance and rehabilitation. As currently authorized, the Subventions program provides up to 75% of eligible project costs from Propositions 84 and 1E. Since 2006, the State has invested approximately $67 million in Delta levee maintenance.

Special Projects. The Delta Levees Special Flood Control Projects provides financial assistance to local levee maintaining agencies for rehabilitation of levees in the Delta. The California Legislature under SB 34, SB 1065, and AB 360 established the program. Since the inception of the program, more than $100 million have been provided to local agencies in the Delta for flood control and related habitat projects. The intent of Legislature, as stated in the Water Code, is to preserve the Delta as much as it exists at the present time. The program presently focuses on flood control projects and related habitat projects for eight western Delta Islands--Bethel, Bradford, Holland, Hotchkiss, Jersey, Sherman, Twitchell and Webb Islands--and for the Towns of Thornton and Walnut Grove.

Five-Year Plans. DWR provides funding to encourage each local agency in the Delta to assess the current conditions of its levees and develop a strategic Five-Year Plan for rehabilitation of its facilities to a desired level of protection. Five-Year Plans will be required for all Special Projects applicants under the future Program Guidelines. The State will fund 100% of the first $50,000 spent on the preparation of Five-Year Plan, 75% of any costs between $50,000 and $100,000 and will not share any costs related to the Five-Year Plan beyond $100,000. The Five-Year Plan must provide an assessment of the district's existing levee system, a strategic plan to meet a desired level of protection, identification of risks to island assets, a long-term funding strategy, habitat mitigation and/or enhancement plans, and a CEQA and permit compliance plan.

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6.3.5 Levee Priorities Authority | **Delta Stewardship Council**

Vest continuing authority for levee priorities and funding with the California Delta Stewardship Council to ensure a cost-effective and sustainable relationship between levee investments and management of the Delta over the long term.

Governor and Legislature, DSC, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation directs DSC, in consultation with the Central Valley Flood Protection Board, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees. The Delta Plan includes the following policy and recommendation:

- RR P1, Prioritization of State Investments in Delta Levees and Risk Reduction: The DSC, in consultation with the DWR, the CVFPB, DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- RR R2, Finance and Implement Local Flood Management Activities: The Legislature should create a Delta Flood Risk Management Assessment District with fee assessment authority.

See also Action 6.3.1, Delta Levee Investment Plan.

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Evaluation Topic: 5 - Water Supply Reliability

4.1.1 Statewide Water Use Efficiency | **Department of Water Resources**

Improve statewide water use efficiency and conservation.

DWR, State Water Board, CUWCC, AWMC, Others

Progress Score: 4 **Enacting Legislation:** Water Code Sections 10608, 85303

Status Description:

The 2009 water legislation SB X7-7 was enacted in November 2009 mandating water conservation targets and efficiency improvements for urban and agricultural water suppliers, respectively. The bill also requires that DWR, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.

Urban Water Conservation. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015. Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011 and include those targets in its 2010 UWMP (due July 2011). Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

Agricultural Water Conservation. Agricultural water suppliers shall prepare and adopt agricultural water management plans by December 31, 2012, and update those plans by December 31, 2015, and every 5 years thereafter. On or before July 31, 2012, agricultural water suppliers shall measure the volume of water delivered to customers (DWR shall adopt regulations that provide for a range of options that agricultural water suppliers may use to comply with the measurement requirement); adopt a pricing structure for water customers based at least in part on quantity delivered; and implement additional efficient management practices. Effective 2013, agricultural water suppliers who do not meet the water management planning requirements established by this bill are not eligible for state water grants or loans.

DWR developed work plans for the 18 actions in the legislation for which DWR is assigned as the lead agency. Seven of the 8 urban actions are complete or ongoing. The revised funding guidelines will be initiated in 2015. Four of the 7 agricultural actions are complete; the remaining 3 will be initiated in 2013. Two of the 3 other activities, including development of the standardized water use reporting form, are underway. To meet these requirements, DWR formed an Urban Stakeholder Committee (USC) and an Agricultural Stakeholder Committee (ASC). DWR also sought public input through public workshops, the SB X7-7 website, a Commercial, Industrial, and Institutional (CII) Task Force, and the rulemaking process. DWR also convened an Agency Team (AT) to seek general advice in the implementation of the SB X7-7 requirements.

http://www.water.ca.gov/wateruseefficiency/sb7/projects.cfm

See 4.1.2, Urban Water Demand, and 4.1.3, Agricultural Water Use Efficiency, for specific actions status.

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4.1.2 Urban Water Demand | **Department of Water Resources**

Reduce urban per-capita water demand through specific recommended actions. | DWR, CUWCC, Others

Progress Score: 4 **Enacting Legislation:** Water Code Section 10608

Status Description:

The 2009 water legislation included SBX7-7, which establishes methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the overall goal of a 20-percent reduction.

In October 2010, DWR published "Technical Methodologies for Calculating Urban Water Use Targets." In February 2011, DWR published "Provisional Method 4 for Determining Water Use Targets." DWR has also published "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" incorporating the requirements of SBX7-7 (March 2011).

Final regulations regarding the exclusion of certain process water from water use calculations at commercial, industrial, and institutional facilities were published on July 8, 2011. The Commercial, Institutional and Industrial (CII) Task Force met 13 times to develop water use Best Management Practices for the CII sector and a report to the Legislature (http://www.cuwcc.org/2column.aspx?id=16620).

Updated Urban Water Management Plans were due to DWR from water providers by July 2011. DWR submitted its first urban water management report to the Legislature on June 11, 2012. This report summarized the evaluation of 381 UWMPs submitted (out of 448 urban suppliers known to DWR). Fifteen water suppliers have a five-year baseline water use under 100 gallons per capita per day (gpcd). DWR's analysis of 342 of the UWMPs showed a statewide target water use reduction of 16.2% to 166 gpcd by 2020. As of January 2013, 397 UWMPs have been submitted to DWR. The 2012 DWR report noted that a second report would be submitted when a majoirty of the UWMPs have been reviewed to provide a summary of urban water use and conservation.

Assembly Bill AB 1420 (2007) (CWC §10631.7) directed DWR to form an Independent Technical Panel (ITP) to provide recommendations to DWR and the Legislature on new demand management measures, technologies and approaches to water use efficiency. DWR convened the ITP on May 2, 2013 to discuss the ITP charter and meeting schedule with the goal of submitting the ITP recommendations to the Legislature by the end of 2014. The Panel members have already been named. The ITP will meet once every 6 to 8 weeks in 2013 and 2014.

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4.1.3 Agricultural Water Efficiency

Ensure the most efficient use of water in agriculture.

Department of Water Resources

DWR, AWMC, CDFA, Reclamation, USDA, Others

Progress Score: 4 **Enacting Legislation:**

Status Description:

In July 2011, DWR prepared, and the Office of Administrative Law (OAL) approved, an emergency agricultural water measurement regulation. On July 11, 2012, OAL approved the permanent Agricultural Water Measurement Regulation (Title 23, Division 2 of the California Code of Regulations, Chapter 5.1, Sections 597, 597.1, 597.2, 597.3, and 597.4) along with the Aggregated Farm-Gate Delivery Reporting Form. The Regulation became effective July 11, 2012.

To comply with provisions of the statute, agriculture water suppliers must submit an Agricultural Water Management Plan (AWMP) by December 31, 2012, again on December 31, 2015, and every five years thereafter. DWR has completed a guidebook and template for preparing Agricultural Water Management Plans. DWR has received 21 AWMPs.

The Agricultural Water Management Council, a voluntary organization formed in the 1990s to develop best management practices has disbanded. DWR will work with agriculture interests and others to update the efficient water management practices based on information in the AWMPs beginning in August 2013.

In May 2013, DWR announced its final proposed Proposition 50 grants for agricultural water management, including $10.6 million for implementation and $4.2 million for research, pilot programs, training, outreach, and technical assistance.

http://www.water.ca.gov/wateruseefficiency/

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4.2.1 Water Recycling | **Legislature**

Modify the Water Recycling Act of 1991 to add a statewide target to recycle on the order of 1.5 million acre-feet of water annually by 2020. | Governor and Legislature

Progress Score: 2 **Enacting Legislation:**

Status Description:

Water Recycling Act of 1991. This Act included Water Code §13577, which established a statewide goal to recycle a total of 700,000 acre-feet (AF) of water per year by the year 2000, and 1,000,000 acre-feet of water per year by the year 2010. According to the CA Water Plan 2013 Update, these goals were not met. Efforts to amend the recycling goals have not been successful. In 2009 AB 410 (De La Torre) would have modified and established recycling targets of 700,000 AF by 2000, 1,000,000 AF by 2010, 1,525,000 AF by 2020, and 2,525,000 AF by 2030. In 2011-2012, AB 2398 (Hueso) would have established a statewide goal of 1.5 million AF by 2020 and 2.5 million AF by 2030.

CA Water Plan. The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. California Water Plan Update 2013 will recommend revised goals for 2020 and 2030 in October 2013.

Recycled Water Policy. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted the following goals for California:

-Increase the use of recycled water over 2002 levels by at least one million acre feet per year (afy) by 2020 and by at least two million afy by 2030.
-Increase the use of stormwater over use in 2007 by at least 500,000 afy by 2020 and by at least one million afy by 2030.
-Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.

Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

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4.2.2 Desalination

Enact legislation now to encourage local water agencies to at least triple the current statewide capacity for generating new water supplies through ocean and brackish water desalination by 2020.

Legislature

Governor and Legislature

Progress Score: 1 **Enacting Legislation:**

Status Description:

The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted goals for recycled water use and stormwater use, but not for desalination (see Action 4.2.1, Water Recycling)

The California Water Plan Update 2009 makes several recommendations to facilitate greater use of desalination in California. These include: ensuring adequate funding to develop emerging desalination technologies; providing technical assistance and funding to local agencies; providing guidance on permitting requirements; and ensuing adequate planning to make certain of a collaborative process. DWR's 2008 California Desalination Planning Handbook remains the seminal resource for desalination planning.
Http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v2c09_desalination_cwp2009.pdf

The 2009 Water Plan Update estimates the following capacities in California desalination by 2025:

26 plants with a capacity of 84,000 acre-feet per year (afy) in operation.
7 plants with a capacity of 81,000 afy in design or construction.
16 plants with a capacity of 314,000 afy planned or projected.

For a total of 49 plants with a capacity of 479,000 afy.

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4.2.3 Urban Stormwater Goals | **Legislature**

Request that the State Water Resources Control Board set goals by 2015 for infiltration and direct use of urban storm water runoff throughout the Delta watershed and its export areas.

Governor and Legislature, State Water Board

Progress Score: 2 **Enacting Legislation:**

Status Description:

Recycled Water Policy. The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted the following goals for California:

-Increase the use of recycled water over 2002 levels by at least one million acre feet per year (afy) by 2020 and by at least two million afy by 2030.
-Increase the use of stormwater over use in 2007 by at least 500,000 afy by 2020 and by at least one million afy by 2030.
-Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.

Low-impact Development. In 2009, the Legislature passed SB 790 (Pavley), which authorized grants for projects designed to implement or promote low-impact development for new or existing developments that will contribute to the improvement of water quality or reduce storm water runoff and for projects designed to implement specified storm water resource plans. The bill authorized a city, county, or special district to develop, jointly or individually, storm water resource plans. The bill also authorized a regional water management group to coordinate its planning activities to address or incorporate into its plan any storm water resource planning that is undertaken pursuant to the bill's provisions.

Stormwater Permits. The State Water Board and Regional Boards issue permits to medium and large metropolitan areas (Phase 1, 100,000 people and larger), smaller communities (Phase 2, less than 100,000 people, industrial facilities, and Caltrans facilities. These permits require stormwater management plans, primarily to address water quality issues. Management measures also include storage and retention of stormwater.

On March 16, 2011 the State Water Board's "Status of Water Boards' Strategic Priority Actions" list identified the following actions among their highest priority for timely completion and committed to direct the resources needed to ensure completion of these priorities by the end of 2012.

Statewide Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit. The MS4 General Permit, which currently covers more than 250 entities in California, expired in May 2008. State Water Board staff is developing a second five-year term period.

Stormwater Industrial General Permit Reissuance. The statewide General Permit for Discharges of Stormwater Associated with Industrial Activities (commonly referred to as the Industrial General Permit), was last reissued in 1997. It is due to be reissued using the approach and principles (including numeric limits) adopted in the 2009 General Construction Permit.

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SWB Action Item 5 is the Caltrans MS4 Permit. Stormwater discharges from the Caltrans Municipal Separate Storm Sewer system (MS4) are regulated under an individual NPDES permit.

4.2.4 Diversion Data Collection | **State Water Board**

Request agencies to ensure that accurate and timely information is collected and reported on all surface water and groundwater diversions in California by 2012.

Governor and Legislature, State Water Board, DWR

Progress Score: 4 **Enacting Legislation:** Water Code Section 5101 and 5107

Status Description:

Water Rights Reporting. The 2009 water legislation included water rights enforcement provisions (SBX7-8), which modified the reporting requirements for surface water diversions, eliminated many exemptions, and added civil and criminal penalties, which had been previously lacking. As the result of this legislation, most diverters in the Delta were required to report diversions for the first time. The law requires any diverter who diverts water after December 31, 1965 to report by July 1 their diversions from the previous year. There are some limited exceptions. Diverters are required to monitor their diversions on a monthly basis starting January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriated $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. The State Water Board has established an online water rights reporting system (see Action 7.1.5).

Groundwater Monitoring and Reporting. The 2009 water legislation also included requirements for DWR to establish a groundwater elevation monitoring and reporting program by January 1, 2012 (SB7X-6). DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. As of January 1, 2013, 63 organizations have been designated groundwater monitoring entities. These entities are reporting on 146 groundwater basins or sub-basins. DWR's role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a public database, which is now available online at http://www.water.ca.gov/groundwater/casgem/online_system.cfm.

Delta Watermaster. On July 7, 2010, the State Water Board appointed Craig M. Wilson as California's first Delta Watermaster for a four-year term. The Delta Watermaster is empowered to take enforcement against unlawful diversions in the Delta and to submit reports on specified water issues. The Delta Watermaster works with Delta diverters to increase compliance with new reporting requirements. As of April 2013, 359 of the 360 (99%) of the diverters required to report have filed the required reports on diversion. Statements of monthly diversion and use for 2012 are due for the first time by July 1, 2013.

Unified Reporting. DWR is developing a unified water use reporting form and database, which is expected to be in place in mid-2014.

See also Action 7.1.5, Water Diversion Compliance and Near-term Action NTA01, Water Diversion Information.

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4.2.5 Water Shortage Contingency Plans | **Department of Water Resources**

Require that all water purveyors develop an integrated contingency plan by 2015 in case of Delta water supply curtailments or drought. | Governor and Legislature, State Water Board, DWR

Progress Score: 3 **Enacting Legislation:** Water Code Section 85021

Status Description:

DWR completed the first statewide drought contingency plan in November 2010 as part of the California Water Plan. DWR is updating the drought contingency plan as part of Water Plan Update 2013 to ensure that it covers preparing for, responding to, and recovering from a drought, including documenting activities and lessons learned from prior droughts including the six-year event of 1987-92 and the more recent 2007-09 drought. An important focus of the updated contingency plan is an emphasis on drought preparedness. The plan identifies important gaps related to preparedness – besides the lack of funding for operational-scale preparedness and response actions – such as absence of skillful seasonal to inter-annual drought forecasting ability, limited understanding of statewide groundwater storage conditions, and lack of effective tools for helping vulnerable small water systems in rural areas.

DWR supports Integrated Regional Water Management planning through guidance, grants, and technical assistance. According to the DWR "Propositions 84 & 1E Integrated Regional Water Management (IRWM) Guidelines" (August, 2010), all proposals must "effectively address long-term drought preparedness by contributing to sustainable water supply and reliability during water shortages. Drought preparedness projects do not include California water emergency response actions, such as trucking of water or lowering well intakes."

The Water Conservation Bill of 2009 (SB7X-7) requires water suppliers to assess current demands and supplies over a 20-year planning horizon and consider various drought scenarios in Urban Water Management Plans (UWMP). The UWMP Act also requires water shortage contingency planning and drought response actions be included in a UWMP every five years. Urban water suppliers covered by the Act are those with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year. 2010 UWMPs were due to DWR by August 1, 2011.

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4.2.6 Integrated Water Management | **Department of Water Resources**

Establish a regulatory framework that encourages efficient and integrated management of water resources at local, regional, and statewide levels, with a focus on specific actions. | Governor and Legislature, State Water Board, DWR

Progress Score: 3 **Enacting Legislation:** Water Code Section 85021

Status Description:

Water Code Section 85021 states that "The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts."

Integrated Water Management for California is coordinated through the State Water Plan and through Integrated Regional Water Management Plans (IRWMPs) implemented by 48 regional water management groups. DWR is preparing Update 2013 for the Water Plan, which includes three initiatives: increase commitment to Integrated Water Management; strengthen agency alignment; and invest in innovation and infrastructure. The Update also includes references to and coordination with 23 related plans and programs, such as the State Wildlife Plan, the CPUC Water Action Plan. FloodSafe Strategic Plan, the Delta Vision Strategic Plan, and Delta Plan.

DWR supports Integrated Regional Water Management (IRWM) planning through guidance, grants, and technical assistance funded from Propositions 50, 84, and 1E. IRWM is implemented across the state through an incentive approach supported by grants to regions implementing IRWM Plans. The 48 regional water management groups cover 87% of the land area of California and 99% of the population. DWR is preparing a strategic plan for the IRWM program. Http://www.water.ca.gov/irwm/stratplan/

DWR awarded $9 million for additional IRWM planning grants in November 2012. Local Groundwater Assistance Grants will be awarded in summer 2013 ($4.7 million). Round 2 Stormwater Flood Management Grants will be awarded in July 2013 ($92 million). Round 2 Implementation Grants will be awarded in September 2013 ($131 million).

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5.1.1 Dual Conveyance Feasibility | **Natural Resources Agency**

Direct the Department of Water Resources and other allied agencies to further investigate the feasibility of a dual conveyance facility, building upon the Bay-Delta Conservation Plan effort. | Governor and Legislature, Resources, DWR

Progress Score: 2 **Enacting Legislation:** Water Code Sections 85020(f), 85304, and 85320(b)(2)(B)

Status Description:

TThe 2009 water legislation directed that the BDCP review and analyze a "reasonable range of Delta conveyance alternatives," including "through-Delta, dual conveyance, and isolated conveyance alternatives and including further capacity and design options of a lined canal, an unlined canal, and pipelines." The legislation further directs that the Delta Plan promote options for new and improved infrastructure relating to water conveyance in the Delta, storage systems, and the operation of both to achieve the Two Co-Equal Goals.

The Delta Plan recommends completion of the BDCP by December 31, 2014 as an important part of improving water management for California and restoring the Delta ecosystem. It further recommends action by DWR and other agencies to complete current water storage investigations and identify smaller, near-term actions and projects to improve the operation of existing Delta conveyance facilities, transfers, storage, and other water system benefits.

In March and May 2013, Resources posted the administrative draft chapters of the Bay-Delta Conservation Plan. On May 10, 2013, the 20,000-page consultant draft EIR/EIS was posted at www.baydeltaconservationplan.com. It describes the potential effects of the BDCP and alternative ways to address water supply reliability and ecosystem restoration in the Sacramento-San Joaquin Delta. The document considers potential effects on water supplies, air quality, agriculture, recreation, transportation, land use, and other aspects of the human and natural environments.

Federal, state and local agencies are reviewing the document in preparation for an Oct. 1 release of the public review draft of the EIR/EIS, which also will mark the beginning of the period for formal public comment. At that time workshops, hearings, and in-Delta office hours will be conducted to help people access EIR/EIS information, ask questions, and make comments

Chapter 3.4 of the plan describes Conservation Measure 1 (CM1), which includes construction and operation of a north of Delta diversion up to 9,000 cubic feet per second (cfs) to be operated in conjunction with and preferentially to south Delta diversion facilities, except at times necessary to meet fish conservation goals. Chapter 5 is the Effects Analysis of the proposed conservation measures, including CM1. Chapter 9 describes several dual conveyance alternatives with varying diversion and conveyance capacity from the Sacramento River to the south Delta pumping plants (3,000 to 15,000 cfs).

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5.1.2 Storage and Conveyance Recommendations | **Legislature**

Direct the Department of Water Resources, the Department of Fish and Game, and other allied agencies to recommend the size and location of new storage and conveyance facilities by the end of 2010. Develop a long-term action plan to guide design, construction, and operation, and present the recommendation and plan to the California Delta Stewardship Council for a consistency determination.

Governor and Legislature, Resources, DWR, CDFW, Reclamation, Others

Progress Score: 0 **Enacting Legislation:**

Status Description:

BDCP and Storage. The 2009 water legislation (SBX7-1) specified the evaluation and compliance requirements for conveyance alternatives in the BDCP process. The legislation provides general statements regarding the importance of storage for improving water supply reliability, but with no additional direction to DWR. The March 2013 BDCP EIR/EIS Administrative Draft, Appendix 1B "Water Storage", provides an overview of the potential for additional water storage, including groundwater storage, large system storage (i.e. CALFED storage), and regional/local storage. The BDCP also asserts that water storage was neither a legally required component of the BDCP nor a project that must be addressed in the cumulative impact analyses for the EIR/EIS for the BDCP.

CALFED Storage Investigations. The CALFED Record of Decision (2000) identified five potential surface storage reservoirs that resulted from screening of 52 potential new or expanded reservoirs. In November 2010, DWR published a progress report on the CALFED storage investigations. That report notes that the four storage projects discussed could produce a long-term average increase in annual yield of approximately 800,000 acre-feet. The planning schedule included in the report estimated that storage studies would continue through 2013, with Federal and State decisions occurring in 2014. The Final Staff Draft Delta Plan recommended that DWR complete the storage investigations for proposed offstream storage facilities by December 31, 2012.

At the California Water Commission's meeting on March 20, 2013, DWR presented its Status Update on CALFED Surface Storage Investigations as follows:

North-of Delta Offstream Storage (Sites): Draft Feasibility Study (FS) – Summer 2013; Draft EIS/EIR – Fall 2013, Final FS and EIS/EIR – Fall 2015.

Shasta Lake Enlargement: Draft FS – February 2012 (Released); Draft EIS – June 2013; Final FS and EIS – Fall 2015

Los Vaqueros Expansion: Draft FS – Fall 2014; Draft EIS/EIR – Fall 2014; Final FS and EIS/EIR – Fall 2016.

Temperance Flat: Draft FS – Fall 2013; Draft EIS/EIR – Spring 2014; Final FS and EIS/EIR – Fall 2015.

2014 Water Bond. The proposed water bond (SBX7-2) would provide funding for the public benefits associated with storage projects. The water bond has been postponed until the November 4, 2014 ballot, as a legislatively-referred bond act. At its March 29, 2013 meeting, the Association of California Water Agencies' (ACWA) Board of Directors identified guidelines for modifying the 2014 water bond to protect key priority areas (including water storage) and aid its passage next year.

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Tulare Lake Basin Storage. The CDFW Central Region participated in the development of "Tulare Basin Conservation Plan Water Supply Strategies Report" by the Tulare Basin Wildlife Partners in 2010. This was intended to be a comprehensive report on the potential for use of wetlands and river corridors in the Tulare Lake Basin for temporary surface storage and groundwater storage/recharge. Funding for storage investigations from Proposition 50 has ended.

5.1.3 Storage and Conveyance Construction | **Department of Water Resources**

Complete substantial development and construction of new surface and groundwater storage and associated conveyance facilities by 2020, with the goal of completing all planned facilities by 2030.

Resources, DWR, Reclamation

Progress Score: 1 **Enacting Legislation:**

Status Description:

Construction to expand Los Vaqueros Reservoir from 100,000 acre-feet to 160,000 acre-feet was initiated in April 2011. CCWD celebrated the completion of the dam construction and reopening of the north side of the watershed to the public in July 2012. Fishing facilities at the south side of the Los Vaqueros Reservoir reopened to the public in October 2012. The project cost $120 million. As of October 2012 the reservoir had filled to 100,000 acre-feet, the capacity of the original reservoir. The additional water storage will help ensure high-quality water deliveries to customers, reliability during drought, and protections for Delta fisheries and the environment.

Construction of other storage projects is pending completion of feasibility studies, environmental documentation, and permitting, which are underway. DWR estimates that storage studies would continue through 2015. If a new water bond is passed, the feasibility studies would be presented to the California Water Commission for potential funding in 2016.

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5.2.1 Reservoir Operations | **Department of Water Resources**

Change the operating rules of existing reservoirs to incorporate and reflect modern forecasting capabilities. | DWR, Reclamation, Army Corps

Progress Score: 2 **Enacting Legislation:** Water Code Section 85309

Status Description:

The 2009 water legislation (SBX7-1) directs DWR, in consultation with USACE and the CVFPB, to prepare a proposal to coordinate flood and water supply operations of the SWP and the CVP, and submit the proposal to the DSC for consideration for incorporation into the Delta Plan. In drafting the proposal, DWR must consider all related actions set forth in the Delta Vision Strategic Plan.

As directed by SBX2-1, DWR, in coordination with others, developed the Plan of Study for a System Reoperation Study in June 2011. The study is identifying and evaluating options for the reoperation of the State's flood protection and water supply systems to improve system efficiency while achieving multiple objectives of improved water supply reliability, flood risk reduction, and ecosystem restoration. As part of Phase 2 of the study, the team is formulating reoperation strategies around the following most promising concepts:

1. Reoperation of Shasta Reservoir in conjunction with north and/or south of Delta groundwater storage.
2. Reoperation of Oroville Reservoir in conjunction with north and/or south of Delta groundwater storage.
3. Integrated SWP and CVP operation.
4. Reoperation of New Exchequer (Lake McClure) in conjunction with different conjunctive management options.

DWR is vetting reoperating ideas with local surface and groundwater storage owners to assess their interest in study of potential reoperation of their facilities with DWR. DWR expects to complete Phase 2 in summer 2013 and begin initial analysis of the most promising strategies. Those strategies that meet the three program objectives will be carried forward for more detail analysis. The schedule for completing the detailed analysis and releasing the report is the summer of 2014.

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5.2.2 San Joaquin Flood Bypass | **Department of Water Resources**

Require the Department of Water Resources to immediately create a flood bypass along the lower San Joaquin River. | Governor and Legislature, Resources, DWR, CVFPB

Progress Score: 2 **Enacting Legislation:** Water Code Section 9613(c)

Status Description:

As part of the Central Valley Flood Protection Act of 2008, the Legislature directed DWR and the Central Valley Flood Protection Board (CVFPB) to "investigate and evaluate the feasibility of potential bypasses or floodways that would significantly reduce flood stage in the San Joaquin River Watershed, upstream and south of Paradise Cut."

In June 2012, the CVFPB approved the Central Valley Flood Protection Plan (CVFPP), which identifies flood conveyance capacity expansion options in the north Delta and South Delta. The Plan provides an overall framework for flood management. DWR is now conducting regional studies, which will examine flood bypass opportunities on the San Joaquin River. On May 1, 2013, DWR issued letters of commitment to fund six regional flood management studies, including three on the San Joaquin River. When the regional plans are completed, DWR will incorporate feasible components of the regional plans in the 2017 CVFPP Update that are consistent with the State Systemwide Investment Approach as defined in 2012 CVFPP.

Paradise Cut Flood Bypass Expansion Project. The South Delta Water Agency is working with DWR and local landowners to expand the Paradise Cut Bypass to route flood flows away from urban areas in Lathrop and Stockton along the San Joaquin River and allow for a greater amount of flow to enter the Cut during high flow times. The project includes necessary dredging and levee work downstream of the Cut to safely pass the additional flow into the deeper Delta channels at acceptable or no additional risk to lands of that area. The project will include overflow and tidal habitat where feasible in coordination with fishery agencies.

See also Action 3.2.3, Flood Conveyance Capacity Expansion.

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5.2.3 Infiltration Planning in Watersheds

Request that the Department of Water Resources encourage greater infiltration as part of watershed management planning.

Legislature

Governor and Legislature, Resources, DWR

Progress Score: 2 **Enacting Legislation:**

Status Description:

There was no direction given by the Legislature in the 2009 water legislation specifically addressing watershed management planning and increased infiltration.

Water Plan Update 2013. DWR's "California Water Plan Update 2013, Chapter 27, Watershed Management," (Administrative Draft of September 2012) includes the following Strategic Practices Recommendations:

"11. Increase precipitation infiltration into the soil to reduce surface runoff to a level that is typical of natural runoff retention patterns; this goal is often achieved by reducing impervious surfaces within a watershed. Retain intact floodplain and other wetlands to the extent possible, to maintain or increase residence time of water in the watershed."

"16. Design drainage and storm water runoff controls to maximize infiltration into local aquifers, and minimize immediate downstream discharges during runoff."

"21. Protect soil resources and restore the functions of drastically disturbed soils, to slow run off and increase rainfall infiltration."

http://www.waterplan.water.ca.gov/cwpu2013/ac-draft/index.cfm

Water Plan 2009. DWR's "California Water Plan Update 2009" contained the policy strategy of requiring local agencies to develop water budgets that quantify the amount of water flowing into and out of the basin. Enhanced infiltration and groundwater flow are an important part of the inflow calculation for the watershed. Increased groundwater storage and conjunctive use of groundwater and surface water are specific strategies recommended for the Delta region.

IRWM Grant Guidelines. In November 2012, DWR and Resources released the final version of the "Integrated Regional Water Management (IRWM) Grant Program Guidelines Under Propositions 84 and 1E." The guidelines note that as per Water Code Section 10544, grant preference will be given to proposals that address statewide priorities including techniques that store and infiltrate runoff while protecting groundwater.
Http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL_2012_FINAL.pdf

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Appendix C
Actions Status by Lead Agency

This appendix the status and progress of the 85 actions recommended in the *Delta Vision Strategic Plan*. Actions are grouped by the responsible lead state agency.

Central Valley Regional Water Quality Control Board C-3
Contra Costa Water District C-10
Delta Protection Commission C-11
Delta Stewardship Council C-18
Department of Fish and Wildlife C-26
Department of Food and Agriculture C-41
Department of Transportation C-47
Department of Water Resources C-48
Emergency Management Agency C-63
Governor C-66
Legislature C-67
Natural Resources Agency C-81
Office of Planning and Research C-83
State Water Resources Control Board C-84

Acronyms

The following are the acronyms used in this appendix.

AWMC	Agricultural Water Management Council
BDCP	Bay-Delta Conservation Plan
BFA	State Board of Food and Agriculture
BTH	California Business, Transportation, and Housing Agency
Cal EMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
Caltrans	Department of Transportation
CCWD	Contra Costa Water District
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Parks and Recreation
cfs	cubic feet per second
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
Central Valley Regional Board	Central Valley Regional Water Quality Control Board
CWC	California Water Commission
Conservancy	Sacramento-San Joaquin Delta Conservancy
CZMA	Coastal Zone Management Act
Delta	Sacramento-San Joaquin River Delta
DOC	U.S. Department of Commerce
DOI	U.S. Department of the Interior
DPC	Delta Protection Commission
DSC	Delta Stewardship Council
DSP	Delta Science Program
DVF	Delta Vision Foundation

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DVSP	Delta Vision Strategic Plan
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERP	Ecosystem Restoration Program
ESA	Endangered Species Act
ESP	Economic Sustainability Plan
FEMA	Federal Emergency Management Agency
IEP	Interagency Ecological Program
IRWM	Integrated Regional Water Management
ISB	Independent Science Board
MOU	Memorandum of Understanding
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTA	Near-term Action
OCAP	Operational Criteria and Plan
Reclamation	Bureau of Reclamation
Regional Board	Regional Water Quality Control Board
Resources	California Natural Resources Agency
SLC	State Lands Commission
State Water Board	California State Water Resources Control Board
SWP	State Water Project
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Progress Evaluation

The Delta Vision Foundation assessed the status of each action in the *DVSP* using a ten-point scale (0 to 10).

Progress and Completion		
0 points	No action	No action by Governor, Legislature, or Agency Director to initiate
1 point	Authorized	Legislative authority granted and Administrative direction and initial funding provided
2 points	Initiated	Purpose defined, work plan and schedule developed, team assembled
3 points	Planned	Planning complete, ready for implementation.
4 points	In Progress Early	Implementation begun, funding authorized, workforce mobilized
6 points	In Progress Mid	Implementation substantially underway
8 points	In Progress Late	Implementation nearing completion
10 points	Completed	Action completed, ongoing adaptive management and maintenance

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Central Valley Regional Water Quality Control Board

3.5.1a Wastewater Discharges

2-Legal and Procedural Milestones

Require the Central Valley Regional Water Quality Control Board to immediately re-evaluate wastewater treatment plant discharges into Delta waterways and upstream rivers and set discharge requirements at levels that are fully protective of human health and ecosystem needs.

Central Valley Regional Board

Progress: 3 **Enacting Legislation:**

Status Description:

Enforcement Activity. The Central Valley Board uses the National Pollutant Discharge Elimination System (NPDES) to regulate all wastewater discharges into the Delta and tributaries to the Delta. Two regulatory actions follow.

Sacramento Permit. On December 9, 2010 The Central Valley Regional Board issued a new NPDES permit to the Sacramento Regional County Sanitation District (SRCSD), which operates the largest wastewater discharger in the Delta, discharging 14 tons of ammonia/ammonium per day. The new permit imposes new ammonia effluent limits and requires tertiary treatment and nitrogen removal. In April 2013, SRCSD and the Central Valley Regional Board settled a challenge to the permit requirements regarding ammonia and nitrates. SRCSD will be implementing treatment plant upgrades over the next 10 years.

Stockton Upgrade. The Stockton Regional Wastewater Control Facility (WWCF) has been upgraded over the last decade to include treatment processes for ammonia. The upgraded facility is significantly reducing ammonia in the treated effluent (per the USEPA Unabridged Advance Notice of Proposed Rulemaking: Water Quality Challenges in the San Francisco Bay/Sacramento-San Joaquin Delta. February, 2011, pages 27-29). The City of Stockton declared bankruptcy on April 2, 2013, in part to discharge a $4 million settlement for past WWTC violations of the federal Clean Water Act. The suit, brought by the California Sportfishing Protection Alliance, claimed that there were 1,530 sewer overflows during the previous five years by the WWCF.

CV-SALTS. Many city or regional wastewater facilities in the Central Valley cannot meet current Basin Plan requirements because of levels of salinity and nitrates found in their wastewater treatment plant discharges. In 2006, the Central Valley Regional Board, the State Water Board, private landowners, and municipal stakeholders formed a coalition called the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). The group is evaluating water quality objectives and contaminant sources to support a Basin Plan Amendment in June 2014, which could lead to new discharge requirements for all water bodies within the Sacramento River Basin—including, among others, discharges from wastewater treatment plants.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

3.5.1b Irrigated Agricultural Lands Discharges — 2-Legal and Procedural Milestones

Require the Central Valley Regional Water Quality Control Board to adopt by 2010 a long-term program to regulate discharges from irrigated agricultural lands. — CVWRCB

Progress: 3 **Enacting Legislation:**

Status Description:

Long-Term Irrigated Lands Regulatory Program. The current Long Term Irrigated Lands Regulatory Program (ILRP), which became final December 12, 2012, sets limits on discharges within the jurisdiction of the Central Valley Regional Board. The Central Valley Regional Board currently implements the ILRP limits on discharges from irrigated lands (e.g. tailwater, water from underground drains, stormwater runoff) to waters of the State by way of the "Conditional Waiver of Waste Discharge Requirements" (Conditional Waiver). The Conditional Waiver regulations mandate that if waiver holder has had two or more exceedances of the same pollutant at the same site within a three-year period, they must prepare and implement a formal Management Plan to control the pollutants.

Grower Coalitions. The Conditional Waiver program, operated under the Long Term ILRP, requires that farmers: (1) form grower Coalition Groups; (2) prepare and implement Monitoring and Reporting Program (MRP) plans; and (3) submit periodic monitoring reports and data. Of the estimated 35,000 growers in the Central Valley, there are about 25,000 landowners/operators, with a total of nearly 5 million acres of land, which are currently regulated by the Central Water Board and are part of Coalition Groups. Growers who do not join a coalition will be directly regulated by the Central Valley Water Board, and will be subject to higher costs.

Beneficial Use Of Agricultural Water Bodies. In October 2011, the Central Valley Water Board reviewed beneficial use designations in agriculturally dominated water bodies and streams. A draft workplan was approved in December 2011. A February 2013 staff update identified 160 natural water bodies in which agricultural drainage or supply water dominates to the point that these rivers, lakes or streams may be unfit for beneficial use as drinking water or habitat for fish and wildlife.

New Waste Discharge Requirements. On December 13, 2012, the Central Valley Board announced new waste discharge requirements (WDR) to protect ground and surface water from irrigated agricultural discharges by farmers in the Eastern San Joaquin River Watershed who are part of a Coalition Group. On March 27, 2013, informed by the beneficial use staff report (above), the Central Valley Board issued a revised WDR implementation schedule:

- General Waste Discharge Requirements for Individuals, May 31, 2013
- Tulare Lake Basin, June 21, 2013
- Grasslands Bypass, June 21, 2013
- San Joaquin County and Delta, October 2013
- Sacramento Valley Rice Growers, October 2013
- Sacramento River Watershed, December 2013
- Westlands Water District, December 2013

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Action # Action Name | Type
Action Description | Other Responsible Organizations

• West-side San Joaquin River, December 2013

USDA's EQIP Program. In March 2012 the USDA's Natural Resources Conservation Service (NRCS) announced four new focus areas where $8.5 million will be made available through the Environmental Quality Incentives Program (EQIP). EQIP grants will help producers undertake water quality and water conservation projects. The four areas to be targeted for water quality/water conservation include:

• Walker Creek portion of the Colusa-Glenn subwatershed in Glenn County.
• Lower Snake River in Sutter County.
• French Camp Slough Watersheds in San Joaquin and Stanislaus counties.
• Eastern portion of the San Joaquin River watershed in Stanislaus and Merced counties.

These watercourses were chosen because of their 2011 exceedances for organophosphate pesticides, potentially resulting in a Clean Water Act (CWA) 303d listing as impaired for beneficial uses.

USDA NRCS Grants . In January 2013, the USDA NRCS in California announced that $5 million is available to farmers and dairy producers east of the San Joaquin River in Merced and Stanislaus counties for water conservation and water quality improvements. The NRCS is also providing approximately $1.5 million to farmers that implement water quality and irrigation efficiency practices in selected San Joaquin County watersheds. California agricultural producers who are certified organic or transitioning to organic production are being given technical and financial assistance through a national organic initiative administered by the NRCS.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

3.5.1c Urban Runoff | 2-Legal and Procedural Milestones

Require the Central Valley Regional Water Quality Control Board to review by 2012 the impacts of urban runoff on Delta water quality and adopt a plan to reduce or eliminate those impacts. | Central Valley Regional Board

Progress: 2 **Enacting Legislation:**

Status Description:

Stormwater Permits, Medium and Large Cities. Phase I National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permits regulate the storm water discharges from municipalities with a population of 100,000 or more (Sacramento, Stockton and Contra Costa County, as well as other cities in the Central Valley). These permits are reviewed and updated on a five year schedule. The permits require the municipalities to incorporate best management practices and control measures in their storm water management program to address specific pollutants of concern and identify sources of pollutants to protect beneficial uses of the receiving waters. Each of the municipalities has its own Regional Board endorsed plan to insure that their discharges don't have adverse impacts.

Stormwater Permits, Small Communities. The SWRCB updated the statewide general NPDES permit (Phase II) that regulates storm water discharges from smaller communities. The Phase II permit covers municipalities with a population less that 100,000 and includes military bases, prisons and university campuses. On February 5, 2013, the State Water Board adopted the final Phase II Small MS4 General Permit, which will become effective on July 1, 2013.

Drinking Water Policy. California's Central Valley watershed is 40 percent of the land area in California, provides more than half of the managed water supply, and contains three-quarters of the irrigated agriculture in California. Urban runoff, treated wastewater effluent, and agricultural practices discharge constituents that have the potential to affect downstream drinking water treatment facilities. In response to these issues, the Central Valley Regional Board, in July 2010, adopted Resolution No. R5-2010-0079 directing staff to establish a drinking water policy for the Sacramento-San Joaquin Delta and upstream tributaries.

Workgroup. As part of this effort, the Water Board established a Central Valley Drinking Water Policy Workgroup (Workgroup) consisting of various stakeholders from the agricultural, urban runoff, wastewater, and drinking water supply communities and State and federal agencies. Technical studies included urban runoff source evaluation and development of a comprehensive analytical model. Workgroup results were published on March 23, 2011 in the "Urban Runoff Source Control Evaluation for Central Valley Drinking Water Policy." The report was finalized in February 2012.

WQCP Amendment to the Basin Plan. In February 2013, the Central Valley Regional Board issued a Draft Staff Report entitled "Amendment To the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins To Establish a Drinking Water Policy for Surface Waters of the Sacramento-San Joaquin Delta and Upstream Tributaries (Staff Report)." The Staff Report provides the rationale and supporting documentation for a proposed amendment to the "Water Quality Control Plan for the Sacramento and San Joaquin River Basin (Basin Plan)." The amendment will add a Drinking Water Policy and a narrative water quality objective for chemical constituents of concern. The Central Valley Regional Board announced on March 25, 2013 that it would consider adoption of the proposed policy in July 2013. All the documents discussed above are available on the Drinking Water Policy website: http://www.waterboards.ca.gov/centralvalley/water_issues/drinking_water_policy/

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

3.5.3 Mercury TMDL Programs	3-Recommended Actions
Establish Total Maximum Daily Load programs by 2012 for upstream areas to reduce organic and inorganic mercury entering the Delta from tributary watersheds.	Central Valley Regional Board

Progress: 3 **Enacting Legislation:**

Status Description:

Mercury TMDLs. TMDL programs are complete for the Cache Creek watershed, Bear Creek, and Harley Gulch. These watersheds are major contributors of inorganic mercury to the Delta. Implementation work is underway to reduce mercury loading from these watersheds.

Basin Plan Amendment. In October 2011 the U.S. EPA approved the Regional Board TMDL and Basin Plan amendment for the control of mercury and methylmercury in the Delta estuary. The amendment assigns mercury allocations to the Delta tributaries. Currently, point sources (wastewater treatment plans and urban stormwater runoff) and non-point sources (irrigated agriculture, wetland managers, and state and federal agencies) are collaborating on developing and implementing methylmercury control studies to develop and evaluate best management practices to reduce methylmercury levels.

Data Sets. Central Valley Regional Board staff, in coordination with State Water Board staff and USEPA, has been working to assess the data submitted by interested parties. More than 250 individual data sets, covering more than 20,000 individual waterbody pollutant combinations and over 150,000 sample points, were received from sources including government agencies, municipalities, environmental groups, citizen groups, and National Pollutant Discharge Elimination System dischargers.

Impaired Reservoirs. Staff from a number of regions are developing statewide mercury TMDLs for 74 of the state's reservoirs impaired by mercury. State Water Board staff is developing statewide mercury objectives. Both of these projects are intended to decrease mercury discharges to surface waters, including tributaries of the Delta. Staff continues to work on the assessment of the data in order to create an accurate and scientifically defensible report. State Water Board staff anticipates that the data assessment work will be completed and available for Regional Board public review by the end of 2013 or early 2014.

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Action # Action Name Action Description	Type Other Responsible Organizations
3.5.4 Comprehensive Delta Monitoring *Begin comprehensive monitoring of water quality and Delta fish and wildlife health in 2009.*	3-Recommended Actions ISB, IEP, State Water Board, Delta Science Program, USGS, CDFW

Progress: 4 **Enacting Legislation:**

Status Description:

Water Quality Monitoring. Numerous agencies and programs are collecting data related to water quality and Delta fish and wildlife health. These agencies include the State Water Board, Central Valley Regional Board, DWR (through Municipal Water Quality Investigations), the Interagency Ecological Program (IEP), and CDFW. The regulatory drivers are the federal Clean Water Act, the National Endangered Species Act, the Porter Cologne Water Quality Control Act, and the California Endangered Species Act.

Delta Data Monitoring. In June 2010 the State Water Board, Central Valley Regional Board, and San Francisco Bay Regional Board adopted the "Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary." It outlines a comprehensive data-monitoring program for the Delta. The short-term (i.e., within 1-2 years) data-monitoring goal is to establish a framework for regularly gathering, compiling, assessing, and reporting readily available data. The long-term goal (within 3-5 years) is to develop a Regional Monitoring Program for the Delta (Delta RMP).

Pulse of the Delta. In March 2012 the Delta RMP issued its second annual report, Pulse of the Delta: Linking Science & Management Delta through Regional Monitoring. The report is available at:
http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/comprehensive_monitoring_program/

California Environmental Data Exchange Network. The Surface Water Ambient Monitoring Program (SWAMP) database is a subset of the California Environmental Data Exchange Network (CEDEN) database (http://www.ceden.org). These data are accessible to stakeholders, and visually display water quality within selected watersheds. Next steps include comparing these data with other databases, and working with stakeholders to identify their expectations and needs. The Water Quality Monitoring Council is developing the Water Quality Portal for the Estuary. It will eventually be used to identify open issues with respect to water quality monitoring. The State Water Board recognizes the need to increase data access while also enhancing coordination among the various entities collecting water quality data. State Water Board staff is coordinating with a variety of organizations and agencies to make data available via CEDEN.

Central Valley Watershed Monitoring Directory. This directory was built to promote and facilitate improved coordination of water monitoring across the basin. The Monitoring Directory was developed with funding and participation from SWAMP and USEPA. The Central Valley Regional Board will continue to fund maintenance, updates, and upgrades for another year, while a long-term sustainability plan is being developed.
Http://www.centralvalleymonitoring.org

Interagency Ecological Program (IEP). The IEP has been conducting cooperative ecological monitoring in the Bay-Delta since 1970. IEP agencies include CDFW, USGS, NMFS, DWR, USFWS, SWRCB, USACE, USBR, USEPA, and DSP. The IEP has the lead role in monitoring and studies required under the Federal

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Biological Opinions (OCAP) and the State water rights permit conditions for the delta operations of the CVP and SWP. In 2011, the IEP coordinated and tracked 144 projects with a combined budget of $39 million. The IEP is coordinating with the Central Valley Regional Board (Stephanie Fong), CDFW (Gregg Erickson), DWR (Karen Gehrts), and others, to help the water board review and draft a comprehensive regional monitoring plan for the Delta.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Contra Costa Water District

NTA05 CCWD Alternate Intake Project | 1-Near-Term Actions

Complete construction of an alternative intake for the Contra Costa Water District. | CCWD

Progress: 10 **Enacting Legislation:**

Status Description:

The Alternate Intake Project is complete and was dedicated on July 20, 2010.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Delta Protection Commission

2.1.1 NHA Designation | 2-Legal and Procedural Milestones

Apply by 2010 for the designation of the Delta as a federally recognized National Heritage Area. | Resources, DPC

Progress: 3 **Enacting Legislation:** Water Code Section 85301(b)(1)

Status Description:

The 2009 water legislation directed the DPC to include in their proposed Delta protection plan to the DSC a plan for achieving state and federal special designation for the Delta. On February 4, 2013, U.S. Senators Dianne Feinstein and Barbara Boxer introduced the Sacramento-San Joaquin Delta Heritage Area Act, a bill that creates California's first National Heritage Area. The bill (S.228) will establish the Sacramento-San Joaquin Delta as a National Heritage Area, to be managed by the Delta Protection Commission. The goal of the National Heritage Area is to conserve and protect the Delta, its communities, its resources and its history. On March 7, 2013, Congressman John Garamendi with original cosponsors Representatives George Miller, Doris Matsui, Jerry McNerney, and Mike Thompson, along with Northern California County Supervisors, announced the introduction of the Sacramento-San Joaquin Delta National Heritage Area Establishment Act. The bill, H.R. 1004, is the identical House companion to S.228.

2.3.1 Delta Economic Development Plan | 3-Recommended Actions

Charge the Delta Protection Commission with facilitating a consortium of local governments to create a regional economic development plan that addresses agriculture, recreation, tourism, and other innovative land uses. | Governor and Legislature, DPC, Local Governments

Progress: 3 **Enacting Legislation:** Public Resources Code Section 29759

Status Description:

The DPC's Economic Sustainability Plan for the Sacramento-San Joaquin Delta (ESP) was approved by the DSC and incorporated into the Delta Plan in 2012.

The ESP made recommendations in four areas:

1. Public safety recommendations, such as flood protection.
2. Economic goals, policies, and objectives in local general plans and other local economic efforts, including recommendations on continued socioeconomic sustainability of agriculture and its infrastructure and legacy communities in the Delta.
3. Comments and recommendation to the Department of Water Resources concerning its periodic update of the flood management plan for the Delta.
4. Identification of ways to encourage recreational investment along key river corridors.

The Legislature has not yet committed resources for implementing the plan.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
2.4.3	**Delta Investment Fund Management**	2-Legal and Procedural Milestones
Place the Fund under the joint management of the Delta Protection Commission and a consortium of local governments.		Governor and Legislature

Progress: 3 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The Legislature established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with the DPC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000. The Fund is subject to appropriation by the Legislature to the DPC. The restructuring of the DPC incorporates local government into the management of the Delta Investment Fund.

The Legislature has not provided any additional funds for Delta investment. In 2011 and 2012, the DPC and Delta Conservancy relied on funds from other sources to complete planning work. The DPC received funding from the Environmental License Plate Fund and the Harbors and Watercraft Fund. Additionally, funding strategies from various foundations was used for the following projects: NHA Phase II Feasibility Study, The Great California Delta Trail, and Delta Working Landscapes. The Delta Conservancy borrowed funds from the DSC to complete the strategic plan and received foundation grant funds to continue outreach and coordination.

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Action # Action Name Action Description	Type Other Responsible Organizations
3.2.4 Delta Recreational Investment *Using the National Heritage Area and regional economic development planning efforts, begin immediately to identify ways to encourage recreational investment along the key river corridors.*	3-Recommended Actions DPC, Local Governments, DC, CDPR

Progress: 3 **Enacting Legislation:**

Status Description:

National Heritage Area. The DPC prepared a feasibility study on a National Heritage Area (NHA) designation for the Delta (draft October 2011, final July 2012) and a Delta Economic Sustainability Plan (final January 2012). National Park Service (NPS) staff in San Francisco and Washington, D.C. reviewed the Feasibility Study for consistency with the NPS criteria for NHA and provided an official letter which stated that it met the ten NPS feasibility study criteria. The study was also submitted to the Delta Stewardship Council for inclusion in the Delta Plan. CDPR released the draft "Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh" for public review in April 2011.

On February 4, 2013, U.S. Senators Dianne Feinstein and Barbara Boxer introduced the Sacramento-San Joaquin Delta Heritage Area Act, a bill that creates California's first National Heritage Area. The bill (S.228) will establish the Sacramento-San Joaquin Delta as a National Heritage Area, to be managed by the Delta Protection Commission. The goal of the National Heritage Area is to conserve and protect the Delta, its communities, its resources and its history. On March 7, 2013, Congressman John Garamendi with original cosponsors Representatives George Miller, Doris Matsui, Jerry McNerney, and Mike Thompson, along with Northern California County Supervisors, announced the introduction of the Sacramento-San Joaquin Delta National Heritage Area Establishment Act. The bill, H.R. 1004, is the identical House companion to S.228.

While the national designation is under consideration, the DPC is embarking on a Delta Heritage Area Initiative (DelHAI) to advance and elevate recognition of the Delta's unique values. By advancing activities and projects that elevate and promote the Delta, the initiative hopes to demonstrate the region's capacity for possible NHA designation.

The Great California Delta Trail. Pursuant to the provisions of Senate Bill 1556 (Torlakson), DPC has continued to develop and plan a trail network through all five counties of the Delta. Grant funding from the California Coastal Conservancy as well as funding and resource commitments from Contra Costa County and the National Parks Service were received allowing DPC to initiate the outreach process in Contra Costa and Solano Counties.

The "Trail Blueprint Report for Contra Costa and Solano" was completed in September 2010. It is a model for the development of a "Trail Blueprint Report for Sacramento, San Joaquin, and Yolo Counties." DPC staff commenced work on the new report in March 2012. When completed, DPC will present it for adoption by the Commission as well as the Boards of Supervisors for Sacramento, San Joaquin, and Yolo Counties. Stakeholder Advisory Committees and Technical Advisory Committees have been formed for each County to be part of the development process. The target date for adoption by the DPC has been pushed out to June 2013.

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Action # Action Name Action Description	Type Other Responsible Organizations
6.2.1 South Delta Land Use Oversight *Immediately strengthen land use oversight of the Cosumnes/Mokelumne floodway and the San Joaquin/South Delta lowlands.*	3-Recommended Actions Legislature, DPC

Progress: 2 **Enacting Legislation:** Public Resources Code Section 29773.5

Status Description:

The 2009 water legislation directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta. In December 2010, the DPC completed the "Sacramento San Joaquin Delta Primary Zone Study," which recommended that the Cosumnes/Mokelumne River Central, Bethel Island and Andrus/Brannan Island be redesignated as part of the Primary Zone and that the area within the City of Rio Vista city limits be changed from the Primary Zone to Secondary Zone. However, following completion of the Economic Sustainability Plan, the DPC recommended no changes to the Primary Zone or additional land use oversight for these areas.

The Delta Plan includes policies to protect floodplains and prevent encroachment in the Cosumnes River-Mokelumne River Confluence, as defined by the North Delta Flood Control and Ecosystem Restoration Project (McCormack-Williamson), or in the Lower San Joaquin River Floodplain Bypass, as described in the Lower San Joaquin River Floodplain Bypass Proposal.

6.2.2 Central Delta Land Use Oversight *Immediately strengthen land use oversight for Bethel Island, the city of Isleton, and Brannan-Andrus Island.*	3-Recommended Actions Legislature, DPC

Progress: 2 **Enacting Legislation:** Public Resources Code Section 29773.5

Status Description:

The 2009 water legislation directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta. In December 2010, the DPC completed the "Sacramento San Joaquin Delta Primary Zone Study," which recommended that the Cosumnes/Mokelumne River Central, Bethel Island and Andrus/Brannan Island be redesignated as part of the Primary Zone and that the area within the City of Rio Vista city limits be changed from the Primary Zone to Secondary Zone. However, following completion of the Economic Sustainability Plan, the DPC recommended no changes to the Primary Zone or additional land use oversight for these areas. The Delta Plan limits new urban development in many areas of the Delta. Regarding Bethel Island, the Delta Plan requires any new development on the island be consistent with the Contra Costa County General Plan.

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Action # Action Name Action Description	Type Other Responsible Organizations
6.2.3 Delta At-Risk Lands Plans *Immediately prepare local plans for these five at-risk locations within the primary zone: Walnut Grove (including the residential area on Grand Island), Locke, Clarksburg, Courtland, and Terminous.*	3-Recommended Actions DPC, DWR, Local Governments, CVFPB, USACOE

Progress: 1 **Enacting Legislation:**

Status Description:

Local plans have not been prepared.

Because all of these communities are protected in whole or in part by project levees, they are included in the Central Valley Flood Protection Plan (approved June 2012). The follow-on regional plans will address specific actions to improve protection for these communities.

DWR has provided funds to Delta Reclamation Districts to prepare 5-year levee plans. DWR is also providing funds for improvements to non-project levees in the Delta according to establish grant guidelines that consider: (1) levee improvements; (2) habitat improvements; and (3) acquisition of habitat credits.

Each of these five areas is included in the respective county Hazard Mitigation Plan. The USACOE has prepared a map book of levees, which has helped DWR identify technical information needs for these five areas. DWR Emergency Response is coordinating with these communities to identify additional technical data to inform emergency response planning and action. Specific flood protection plans for these areas have not been completed.

The Delta Plan added land use oversight for Walnut Grove (including the residential area on Grand Island), Locke, Clarksburg, Courtland, and Terminous.

DPC Primary Zone Study Policy #5 also addresses this issue indirectly. Policy #5 says that local general plans have to add criteria for evaluation of general plan amendments under Public Resources Code Section 29763.5. (PRC Section 29763.5 lists 11 eco-friendly requirements.) This implies that these five towns have to have general plans in place.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

NTA02 Delta Information Collection — 1-Near-Term Actions

Initiate collection of improved socio-economic, ecosystem, and physical structure data about the Delta to inform policy processes and project level decision making by all public agencies, local, state, and federal.

DWR, CDFW, DPC, DSC, State Water Board, Regional Boards, and Local Govts

Progress: 3 **Enacting Legislation:** Public Resources Code section 29759, Water Code Section 85086(a), Water Code 12924, Water Code Sections 13167 and 13181

Status Description:

Diversion Data. Water Code section 85086(a) instructed the State Water Board to establish an effective system of Delta watershed diversion data collection and public reporting by December 31, 2010. The State Water Board meets this requirement—it has an online reporting tool for water rights diversion reporting. (See NTA01).

Groundwater Data. Water Code section 12924 established a program for the collection of groundwater elevation data. DWR has developed the CA Statewide Groundwater Elevation Monitoring Program (CASGEM) to collect groundwater elevations and make the data available online. Monitoring Entities conducted the first round of groundwater elevation monitoring in Fall 2011, and submitted data to DWR by January 1, 2012. As of May 31, 2013 there are 67 monitoring entities covering 177 groundwater basins or subbasins. DWR has not received data for 40 of these basins. A total of 362 groundwater basins or subbasins (70%) are not being monitored. DWR completed the 2012 CASGEM Status Report on February 23, 2012, prepared for the Governor and the Legislature as required by the Water Code (§10920 et seq.). The report outlines the background of the CASGEM Program and describes the first two years of implementation.

Aquatic Species and Habitat Inventory. The IEP initiated an inventory of research and monitoring in the Delta to improve information sharing and facilitate decision-making. The IEP includes: DWR, CDFW, and the State Water Board; USFWS, Reclamation, USGS, USACE, NMFS, and USEPA; and the San Francisco Estuary Institute. The IEP agencies have compiled an inventory of studies and monitoring efforts related to IEP core and agency-directed studies. The IEP Coordinators have initiated a business process review to ensure there is an on-going process to manage, track and report all research and monitoring efforts. The IEP supported the development of the CA Water Monitoring Council's My Water Quality portal, a public facing website.

Water Quality Monitoring Council. Water Code Sections 13167 and 13181 and the MOU between CalEPA and Resources require the California Water Quality Monitoring Council (Monitoring Council) to develop recommendations to improve the coordination and cost-effectiveness of monitoring, enhance the integration of data, and increase public accessibility to data. The Monitoring Council launched a public website (My Water Quality portal) in 2010. The "2012 Progress Report And Recommendations Of The California Water Quality Monitoring Council" was submitted to Matthew Rodriquez (CalEPA) and John Laird (Resources) on May 9, 2013. In their cover letter, the Monitoring Council reminded Secretaries Rodriquez and Laird that the Council was still awaiting for their endorsement with respect to the Council's recommendations of January 13, 2012. The Secretaries endorsement of the Monitoring Council's "Comprehensive Monitoring Program Strategy for California" were crucial to resolving the State's lingering monitoring, assessment and data access issues. Without instructions to at least the eighteen departments, boards, commissions, and conservancies explicitly named in the legislation, (all but one of which reside within their two agencies), the goals of SB 1070 cannot be realized.

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Action # Action Name | Type

Action Description | Other Responsible Organizations

Pulse of the Delta. On March 11, 2011 the Aquatic Science Center issued the first annual "Pulse of The Delta 2011: Monitoring and Managing Water Quality in the Sacramento–San Joaquin Delta." The Aquatic Science Center 2012 The Pulse of the Delta: Linking Science & Management through Regional Monitoring (2012 Pulse) was released in December 2012. Publication of The Pulse is a project of the Delta Regional Monitoring Program funded by the State Water Board and USEPA. The "Status and Trends" section of the 2012 Pulse has a trove of scientific data on Delta monitoring results. The IEP, USGS, Central Valley Regional Board, CDFW, DWR, and scientists at the UC Berkeley and SF State Romberg Tiburon Center compiled the information.

See also Action 3.5.4, Comprehensive Delta Monitoring.

Socio-economic Information. Public Resources Code section 29759 required the DPC to adopt an Economic Sustainability Plan (ESP) by July 1, 2011. The ESP compiled baseline socio-economic data for the Delta. The ESP recommended additional and ongoing data collection regarding recreation, development of an economic scorecard for the Delta, and additional engineering and economic research by the Delta Science Program. The ESP was approved by the DSC and incorporated into the Delta Plan in 2012. The next update to the ESP is due in 2016. The DPC's 2012 Annual Report (February 12, 2013) notes that the DPC will continue to monitor economic data in the Delta region.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Delta Stewardship Council

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Action # Action Name Action Description	Type Other Responsible Organizations
6.1.4 Infrastructure Protection Strategies	3-Recommended Actions
Complete a comprehensive analysis of the costs and benefits of infrastructure protection strategies. Adopt a policy based on its findings by 2012.	BTH, CPUC, ERCDC, CVFPB

Progress: 1 **Enacting Legislation:** Water Code Section 85307

Status Description:

The 2009 water legislation suggests that the DSC, "...in consultation with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission, may incorporate into the Delta Plan additional actions to address the needs of Delta energy development, energy storage, and energy transmission and distribution." The Delta Plan includes recommendation DP R19, Plan for Delta Energy Facilities: The Energy Commission and Public Utilities Commission should cooperate with the Delta Stewardship Council as described in Water Code section 85307(d) to identify actions that should be incorporated in the Delta Plan by 2017 to address the needs of Delta energy development, storage, and distribution.

The Final Staff Draft Delta Plan describes a process to prioritize levee investments to protect Delta infrastructure. The proposed process would include an "economics-based risk analysis" for Delta islands that would consider the value of protecting infrastructure, land uses, and people in the Delta. The Delta Plan includes the following policy and recommendation related to analyzing the costs and benefits of infrastructure protection strategies (See also 6.3.1, Delta Levee Investment Strategy.):

- RR P1 Prioritization of State Investments in Delta Levees and Risk Reduction: The Delta Stewardship Council, in consultation with the Department of Water Resources, the Central Valley Flood Protection Board, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- DP R6 Plan for State Highways: The Delta Stewardship Council, as part of the prioritization of State levee investments called for in RR P1, should consult with the California Department of Transportation as provided in Water Code section 85307(c) to consider the effects of flood hazards and sea level rise on State highways in the Delta.

- RR R3 Fund Actions to Protect Infrastructure from Flooding and Other Natural Disasters: The CPUC should immediately commence formal hearings to impose a reasonable fee for flood and disaster prevention on regulated privately owned utilities with facilities located in the Delta.... The CPUC should direct all regulated public utilities in their jurisdiction to immediately take steps to protect their facilities in the Delta from the consequences of a catastrophic failure of levees in the Delta, in order to minimize the impact on the State's economy.... The Governor, by Executive Order, should direct State agencies with projects or infrastructure in the Delta to set aside a reasonable amount of funding to pay for flood protection and disaster prevention. The local share of these funds should be allocated as described above.

The Central Valley Flood Protection Act of 2008 directed DWR to prepare the Central Valley Flood Protection Plan (CVFPP). The CVFPP is a flood management planning effort that addresses flood risks and ecosystem restoration opportunities in an integrated manner. It specifically proposes a system wide approach to flood management for the areas currently protected by facilities of the State Plan of Flood Control (SPFC). Approximately two-thirds of the Delta levees

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Action # Action Name | Type
Action Description | Other Responsible Organizations

are not included in the SPFC. The CVFPP considers impacts to areas of the Delta not covered by the SPFC and does not include an analysis of the costs and benefits of infrastructure protection strategies in these areas.

6.3.1 Delta Levee Investment Plan | 3-Recommended Actions

Require the Department of Water Resources, in cooperation with local Reclamation Districts and other agencies, to develop a comprehensive plan for Delta levee investments. | Governor and Legislature, Resources, DSC, DWR, CVFPB, Others

Progress: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation requires the DSC, in consultation with CVFPB, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees. The Delta Plan includes the following policy and recommendation:

- RR P1 Prioritization of State Investments in Delta Levees and Risk Reduction: The Delta Stewardship Council, in consultation with the DWR, the CVFPB, the DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- RR R2 Finance Local Flood Management Activities: The Legislature should create a Delta Flood Risk Management Assessment District with fee assessment authority (including over State infrastructure) to provide adequate flood control protection and emergency response for the regional benefit of all beneficiaries, including landowners, infrastructure owners, and other entities that benefit from the maintenance and improvement of Delta levees, such as water users who rely on the levees to protect water quality.

This district should be authorized to:
- Identify and assess all beneficiaries of Delta flood protection facilities.
- Develop, fund, and implement a regional plan of flood management for both Project and non-project levees of the Delta, including the maintenance and improvement of levees, in cooperation with the existing reclamation districts, cities, counties, and owners of infrastructure and other interests protected by the levees.

The Delta Plan added important details. Improvement of non-project levees to the FEMA Hazard Mitigation Plan (HMP) standard can now be funded without justification of the benefits. Improvement to a standard above HMP, such as PL 84-99*, may be funded as befits the benefits to be provided, consistent with the DWR's current practices and any future adopted investment strategy (islands planned for ecosystem restoration are not included.) (RR P1).

*The PL 84-99 standard is a minimum requirement established by USACE for levees that participate in its Rehabilitation and Inspection Program (33 United States Code 701n) (69 Stat. 186).

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

6.3.2 Levee Bond Fund Priorities	3-Recommended Actions
Prioritize the $750 million appropriated by Proposition 1E and Proposition 84 funds for the improvement of Delta levees, including in legacy towns.	DWR, CVFPB, CWC

Progress: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation requires the DSC, in consultation with CVFPB, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees.

DWR submitted "A Framework for Department of Water Resources Investment in Delta Integrated Flood Management in February 2011. DWR expects to finalize the Framework by the end of 2012.

In the Delta Plan, the DSC established a policy that "the Delta Stewardship Council, in consultation with DWR, the CVFPB, DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015. These priorities shall be consistent with the provisions of the Delta Reform Act in promoting effective, prioritized strategic State investments in levee operations, maintenance, and improvements in the Delta for both levees that are a part of the State Plan of Flood Control and non-project levees."

According to Delta Plan Chapter 8, page 304, Propositions 84 and 1E have provided substantial public financing toward most recent Delta levee projects. The Delta Levees System Integrity Program receives funding from both Propositions 1E and 84. This program consists of two programs, the Delta Levees Subvention Program and the Special Projects Program. These two programs provide State-matching funds for maintaining and improving Delta levees.

Delta Plan Table 8-1 summarizes the current balances for general obligation bonds by individual bond act related to water, ecosystem restoration, and flood protection. The statute generally dictates the specific types of projects or programs on which funds can be spent. Table 8-3 "Annual State and Federal Expenditures in California by Program Element (2012-13) shows that the anticipated Risk Reduction/Levee Integrity expenditures are $54,509,231 ($8,949,231 from the State and $45,560,000 from the federal government).

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Action # Action Name Action Description	Type Other Responsible Organizations
6.3.3 Delta Levees Classification Table *Require those preparing the comprehensive levee plan to incorporate the Delta Levees Classification Table to ensure consistency between levee designs and the uses of land and water enabled by those levees.*	3-Recommended Actions Governor and Legislature, Resources, DWR, CVFPB

Progress: 2 **Enacting Legislation:**

Status Description:

The DVSP recommendations with respect to Action 6.3.3 had been satisfied in the earlier versions of the Delta Plan. The four levee standards and guidance applicable to the Delta were discussed and illustrated in the Final (Sixth) Staff Draft Delta Plan (5/14/12); they were ordered from highest to lowest level of flood protection, although no particular standard was recommended. Prior versions of the Delta Plan mandated that investment priorities be set in accordance with the Levee Classifications based on Land Uses Table. The DSC removed the Delta Levees Classification Table that had been included in earlier drafts. These sections have now been replaced with the levee investment priorities process in RR P1, including near-term priorities.

6.3.5 Levee Priorities Authority *Vest continuing authority for levee priorities and funding with the California Delta Stewardship Council to ensure a cost-effective and sustainable relationship between levee investments and management of the Delta over the long term.*	3-Recommended Actions Governor and Legislature, DSC, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

The 2009 water legislation directs DSC, in consultation with the Central Valley Flood Protection Board, to recommend in the Delta Plan priorities for State investments in levee operation, maintenance, and improvements in the Delta, including both levees that are a part of the State Plan of Flood Control and non-project levees. The Delta Plan includes the following policy and recommendation:

- RR P1, Prioritization of State Investments in Delta Levees and Risk Reduction: The DSC, in consultation with the DWR, the CVFPB, DPC, local agencies, and the California Water Commission, shall develop priorities for State investments in Delta levees by January 1, 2015.

- RR R2, Finance and Implement Local Flood Management Activities: The Legislature should create a Delta Flood Risk Management Assessment District with fee assessment authority.

See also Action 6.3.1, Delta Levee Investment Plan.

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Action # Action Name Action Description	Type Other Responsible Organizations
7.2.1 Delta Plan *Develop a legally enforceable Delta Plan.*	2-Legal and Procedural Milestones Governor and Legislature, DSC

Progress: 3 **Enacting Legislation:** Water Code Section 85300

Status Description:

The 2009 water legislation requires the DSC to develop a Delta Plan. The DSC approved the final Delta Plan on May 16, 2013. The Delta Plan includes 14 regulatory policies and 71 recommendations to implement the requirements of the 2009 water legislation and other laws to achieve the Two Co-Equal Goals. The process for appealing projects to the DSC for a consistency determination is described in statute and defined in the appeals procedures adopted by the DSC and attached for reference purposes as Delta Plan Appendix B.

7.2.2 Delta Plan Adaptive Management *Institutionalize adaptive management through updates to the California Delta Ecosystem and Water Plan every five years.*	3-Recommended Actions Governor and Legislature, DSC

Progress: 3 **Enacting Legislation:** Water Code Section 85300

Status Description:

The Delta Reform Act requires updates to the Delta Plan every five years. This requirement is incorporated into the Delta Plan. The DSC Delta Science Program has developed an adaptive management strategy as part of the Delta Plan. The strategy is covered in detail in Delta Plan Appendix A. The Delta Plan includes example performance measures to evaluate progress and accomplishment in implementing the Delta Plan. The DSC has committed to updating these measures by January 1, 2014. DSC also maintains the CALFED budget and project performance tracking system.

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Action # Action Name Action Description	Type Other Responsible Organizations
7.2.3 Adaptive Management Program *Charge the Delta Science and Engineering Board, with support of the Delta Science and Engineering Program, to develop a science-based adaptive management program to provide for continued learning of, and adaptation to, actions implemented by state, federal, and local agencies in the Delta.*	3-Recommended Actions Governor and Legislature, DSC, ISB

Progress: 3 **Enacting Legislation:** Water Resources Code Section 85280

Status Description:

The 2009 water legislation established the Delta ISB with a mission to "provide the best possible unbiased scientific information to inform water and environmental decision-making in the Delta. That mission shall be carried out through funding research, synthesizing and communicating scientific information to policymakers and decision makers, promoting independent scientific peer review, and coordinating with Delta agencies to promote science-based adaptive management. The Delta Science Program shall assist with development and periodic updates of the Delta Plan's adaptive management program."

The DSC Delta Science Program has developed an adaptive management strategy as part of the Delta Plan. The strategy is covered in detail in Delta Plan Appendix A. Delta Plan Appendix A discusses generally the monitoring programs and data collection systems to support the adaptive management process. Monitoring programs and data collection systems were needed to support the adaptive management process (See DVSP Action 7.2.3, page 133).

Per Delta Plan Chapter 2, General Recommendation 1 (G R1) the DSC has set a deadline of December 31, 2013 for development of a Delta Science Plan. The Delta Science Plan must address data management, synthesis, and scientific exchange and communication strategies to support adaptive management and improve the accessibility of information.

Note: All references to engineering were dropped from the code by the Delta Reform Act. The "Delta Science and Engineering Board" became the "Delta Independent Science Board (ISB);" the "Delta Science and Engineering Program" became the "Delta Science Program." In 2012, the DSC added engineering expertise to the ISB when filling a vacancy.

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Action # Action Name Action Description	Type Other Responsible Organizations
7.4.1 Federal Participation *Use existing authority under the CALFED Record of Decision to maximize participation of federal agencies in implementation of the Delta Vision Strategic Plan until the Delta Plan is completed.*	3-Recommended Actions DSC, Others?

Progress: 2 **Enacting Legislation:** Water Code section 85082

Status Description:

Federal law now incorporates the Two Co-Equal Goals. The Delta Plan notes that the federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following: The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem…Nothing herein modifies existing requirements of Federal law. (Section 205)

The Delta Plan does not address authorities or commitments for federal action provided by the CALFED Record of Decision.

The Final Delta Plan notes that the DSC staff will work with federal agency representatives to explore opportunities for federal participation in Delta Plan implementation efforts to help those agencies comply with this new Congressional policy directive, specifically seeking Department of Commerce approval of the Delta Plan under the Coastal Zone Management Act, which would establish DSC authority to review federal actions for consistency with the Delta Plan.

7.4.2 Coastal Zone Management Act Consistency *Prepare the California Delta Ecosystem and Water Plan according to guidelines of the Coastal Zone Management Act, in order to achieve ongoing federal consistency.*	2-Legal and Procedural Milestones DSC

Progress: 2 **Enacting Legislation:** Water Code sections 85300 (d)(1)(A) and 85300(d)(2)

Status Description:

The 2009 water legislation directed the DSC to craft the Delta Plan consistent with the federal Coastal Zone Management Act of 1972 (16 U.S.C. Sec. 1451 et 9 seq.), and submit the Plan for approval to the United States Secretary of Commerce. The Final Delta Plan notes the following:

"[T]he Delta Reform Act requires the Council to pursue a compliance mechanism that requires consistency of federal actions. The Delta Reform Act identifies the federal Coastal Zone Management Act of 1972 (CZMA), or 'an equivalent compliance mechanism,' as the preferred means to accomplish this objective… In this regard, the Council staff has met, and will continue to meet, with federal agency representatives to identify the appropriate process to submit the Delta Plan to the Secretary of Commerce for approval under CZMA (and with representatives of the California Coastal Commission and the San Francisco Bay Conservation and Development Commission (BDCP), which administer California's coastal management program)."

There is no further discussion of the CZMA requirements and whether the Delta Plan was developed consistent with those requirements.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Department of Fish and Wildlife

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Action # Action Name Action Description	Type Other Responsible Organizations
3.1.1 Floodplain Inundation	3-Recommended Actions
Increase the frequency of floodplain inundation and establish new floodplains.	CDFW, DC, DWR, CVFPB

Progress: 2 **Enacting Legislation:**

Status Description:

Yolo Bypass
BDCP Conservation Measure 2 (CM2) in the March 2013 administrative draft of the BDCP Conservation Strategy calls for development of a Yolo Bypass fisheries enhancement plan. As currently written, CM2 proposes a suite of actions including inundating the bypass by notching the Fremont Weir on the eastside of the bypass to increase the availability of floodplain habitat in the bypass for fish rearing and spawning; provide adult fish passage through the Yolo Bypass over the Fremont Weir; and realign Putah Creek. A Yolo Bypass Fishery Enhancement Planning Team has been established by the BDCP Program to develop implementation plans with local government, landowners, and others.

The NMFS OCAP Biological Opinion Reasonable and Prudent Alternatives (RPA) require Reclamation and DWR to prepare an implementation plan for restoration of habitat in the Yolo Bypass by December 31, 2011. Reclamation and DWR have submitted their implementation plan for RPA actions 1.6.1 and 1.7 to NMFS and filed a NOI/NOP in early 2013.

Fremont Weir Fish Passage and Increased Floodplain Inundation. Status: Currently in conceptual design phase, alternatives are being hydraulically modeled. Alternative development, selection, environmental documentation and permitting will begin in 2013. Challenges: loss of agricultural production, potential impacts to federal and state funded restoration sites, loss of public access during flooding, conflicting federal and state easements on private lands.

Lisbon Weir Improvements and Tule Canal Connectivity. Status: Evaluating flow criteria to feed into design options. Project to be funded through BDCP or by responsible agencies for the Biological Opinions. Challenges: Current structure is costly to maintain; progress contingent on completion of larger programmatic environmental documentation.

Lower Putah Creek Re-alignment and Floodplain Restoration. Status: Conceptual designs currently being evaluated. The Yolo Basin Foundation was awarded an ERP grant to develop a fully permitted construction ready design and is conducting environmental compliance and design. Challenges: Continued debate among multiple agencies and stakeholders over design concept – agricultural delivery channel or more naturalistic creek, and locating where the water will enter the Toe Drain to meet the Putah Creek accord and water right requirements. Securing additional funding.

The ERP Conservation Strategy will include two Conservation Priorities related to floodplains in the Delta: 1) Reestablish floodplain inundation and channel floodplain connectivity of sufficient frequency, timing, duration, and magnitude to support the restoration and maintenance of functional natural floodplain, riparian, and riverine habitats, including freely meandering reaches.; 2) Manage floodplain habitats to enhance seasonal shallow water benefits for native fish and wildlife, including the Yolo and Sutter bypasses.

Yolo Bypass Fishery Enhancement Coordination. As noted above, there are numerous fishery enhancement planning efforts being undertaken concurrently

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in the Yolo Bypass that are being coordinated across numerous federal and state agencies, local governments, NGOs and stakeholders. Specifically, CCDFW was awarded a Section 6 HCP planning grant to assist with the development of BDCP. One of the many tasks is to provide funding to ensure close coordination between BDCP and OCAP fishery enhancement planning efforts. There is also close coordination between other fishery restoration actions (e.g. Lower Putah Creek Re-alignment and BDCP/OCAP fishery restoration planning) to ensure that any plans or actions are consistent and meet the needs of all planning efforts.

Other Floodplain Actions
McCormack-Williamson Tract. See NTA08, Near-term Restoration Actions

Seasonally Inundated Floodplain Restoration. The BDCP has proposed CM5-Seasonally Inundated Floodplain Restoration, which includes restoring 10,000 acres of seasonally inundated floodplain habitat within the north, east, and/or south Delta. It is assumed that the majority of this habitat will be created in the south Delta. To help facilitate the development of restoration locations the Resources established the BDCP South Delta Habitat Working Group in August 2011. The goal of the group was to investigate opportunities for improving habitat in the South Delta that also provided flood management benefits. While BDCP is not responsible for paying for flood management programs, the conservation measure should be developed in a way that integrates flood hazard reduction and other economic benefits where consistent with BDCP objectives. Concept level planning has resulted in the identification of four south Delta corridors (see BDCP Figure 3.4-20) for potential implementation of floodplain restoration .

FloodSAFE
Restoring natural river processes, including floodplain inundation, is an important component of statewide water management planning in the CVFPP and Conservation Strategy (CS). Flood bypass concepts for the Yolo Bypass and San Joaquin River are included in both planning activities. CCDFW is coordinating closely with DWR to integrate ecosystem restoration with flood and water management actions and to develop a Conservation Strategy that will provide net benefits to species and habitat while increasing permitting efficiency. DWR solicited grant proposals for projects within the State Plan of Flood Control Area (which includes the Yolo Bypass and part of the Delta) that would provide advanced mitigation for activities planned as a part of the CVFPP. CCDFW reviewed and commented on the forty-one grant proposals for restoration projects within the Sacramento and San Joaquin watersheds that were submitted, of which seven will be awarded funding. Those seven projects are in various locations, but three are within the Delta or nearby are 1) State of California West Sacramento Floodplain Mitigation Bank (proposal from WSAFCA); 2) Bullock Bend Conservation Bank (for Salmonid habitat) which is in Yolo county within the Colusa basin on the Sacramento River, and 3) Brush Rabbit Flood Refugia, Census & Reintroduction within the San Joaquin National Wildlife Refuge.

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Action # Action Name Action Description	Type Other Responsible Organizations
3.1.2 Tidal Habitat Restoration *Restore tidal habitats and protect adjacent grasslands and farmlands throughout the Delta, with active near-term pursuit of restoration targets.*	2-Legal and Procedural Milestones CDFW, DC, DWR, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Sections 85085(c) and (d)

Status Description:

The agencies are coordinating regional restoration planning efforts, including the Ecosystem Restoration Program (ERP), the Fish Restoration Program Agreement (FRPA), BDCP, the Delta Plan, the Delta Conservancy's Restoration Network, and the Suisun Marsh Plan. CCDFW, NMFS, and USFWS are finalizing the ERP Conservation Strategy for the Delta (See NTA08, Near-term Restoration Actions)

Ecosystem Restoration Program (ERP)
ERP has 32 ongoing restoration projects in the CALFED Bay and Delta Region (including acquisition (3), planning (4), pilot/demonstration projects (2), full-scale implementation (4), monitoring (2), research (16), and technical support (1). These projects total approximately $38M. Restoration of intertidal and shallow subtidal areas continues to be a very high priority for the Delta and will generally be located on the margins of lands near sea level.

Example ERP Tidal Marsh restoration projects:
ERP-02D-P54. Aims to acquire through easement up to 1,100 acres of Delta slough habitat in the Cache Slough Complex. Status: one 146-acre easement on the Thomas Ranch has been acquired, and an additional 155 acres of easements on Barker Slough are being considered. All easements for this project will be held by Solano Land Trust.

ERP-07D-P01, and 07D-P02 are aspects of a larger effort to acquire up to 500 acres in Suisun Marsh through either fee title or easement. P01 is covering the public notification and site selection, and P02 deals with the actual acquisition. When the acquisition occurs it is anticipated that the CCDFW or a 3rd party will either be the owner or hold the easement.

See Ecosystem Restoration Program Plan- Year 13 Annual Report (State FYs 2012-13; Federal FY 2013; https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=65144)

Fish Restoration Program Agreement (FRPA)
FRPA was signed on October 18, 2010, and addresses specific OCAP habitat restoration requirements of the USFWS and NMFS Biological Opinions (BOs) for State Water Project (SWP) and Central Valley Project (CVP) operations, including the habitat restoration requirements of the CCDFW Longfin Smelt Incidental Take Permit (ITP) for SWP Delta Operations. The specific actions and mitigation acreage that will be implemented through FRPA as follows:
• DWR to restore minimum of 8,000 acres of intertidal and associated subtidal habitat in the Delta and Suisun Marsh (Delta Smelt BO RPA Component 4)
• Participate in the restoration of Battle Creek (NMFS BO RPA Actions 1.2.6)
• Funding and technical assistance for Yolo Bypass, Liberty Island and Lower Cache Slough fish passage improvement (NMFS BO RPA Action Suite 1.6 and 1.7)

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• 800 acres and associated sub Θdal wetland habitat in the mesohaline part of the Delta estuary (Long⍰n Smelt ITP Condi Θon 7)

FRPA Milestones
• FRPA signed on October 18, 2010
• $12 million transferred to the Ba Σle Creek Salmon and Steelhead Restora Θon Project
• CCDFW hires Region and Water Branch Sta f Enfvironmental Scien Θsts into FRPA program, Winter 2012
• FRPA Implementa Θon Strategy for Habitat Restora Θon and Other Ac Θons for Listed Delta Fish approved March 9, 2012 – includes enhancement plans for Liberty Island and lower Cache Slough
• Cache Slough Complex Conserva Θon Assessment to be completed by Fall 2013
• BDCP approved for six posi Θons in CCDFW Region 3 to develop and run the FRPA monitoring program in consulta Θon with IEP and BDCP monitoring programs
• FRPA monitoring program is in development in consulta Θon with IEP, BDCP, and ERP
• Programma Θc Stakeholder Assessment and Communica Θon & Engagement Plan completed. Public Outreach Program underway and ongoing
• FRPA website completed and online at h Σp://www.water.ca.gov/environmentalservices/frpa.cfm
• Overlook Club in Suisun Marsh purchased for restora Θon
• Land Acquisi Θon work group formed and ac Θvely pursuing land for restora Θon and iden Θfying constraints and opportuni Θes for Θmely acquisi Θon

Prospect Island Tidal Restoration Project milestones:
• Phase 1 hydraulic modeling completed
• DRERIP evalua Θon of Prospect Island design alterna Θves completed h Σps://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=59671
• Phase 2 hydraulic modeling underway
• Seepage Analysis for Ryer Island in ⍰nal analysis
• Prospect Island Communica Θon and Engagement Plan completed
• NOP released in May 2013
• Public scoping mee Θng completed June 10, 2013
• Project permi ţ ng underway
• Interim land management underway

FRPA Constraints:
USACE 408 permits for breaching Sacramento Deep Water Ship Channel levee on the west side of Prospect Island preclude inclusion of west side levee breaches. USACE would have to decommission the entire Sacramento DWSC navigation project before granting a permit to breach. Although the Port of Sacramento is not an economically viable institution, USACE is obligated to maintain the navigation project.

Performance Measures
Significant progress has been made towards generating performance measures for ecosystem restoration in the Delta, including the following.

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Action # Action Name Type

Action Description Other Responsible Organizations

• A suite of dra Ōperformance measures for ⍰oodplain restora Θon is included in the ERP Conserva Θon Strategy described above.
• Several coordinated e fonts to generate performance measures for the Delta ecosystem are underway:
othe Delta Plan (in coordina Θon with the DSP and DSC)
othe California Estuary Monitoring Workgroup for the My Water Quality web portal
• A conceptual model for Θdal marsh func Θon has been developed under DRERIP (see h Σp://www.dfg.ca.gov/ERP/conceptual_models.asp),informing identification of expected outcomes for restoration projects, e.g. FRPA's Prospect Island, Lower Yolo Ranch.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

3.2.1 Habitat Corridors — 3-Recommended Actions

Improve physical habitats along selected corridors by 2015. — CDFW, DC, DWR, CVFPB

Progress: 2 **Enacting Legislation:**

Status Description:

CCDFW continues to plan for and promote habitat corridors and contiguous habitats in all of its conservation and restoration activities. Examples of programs include BDCP, FRPA and related FRPA Implementation Plan, and ERP Conservation Strategy, which guides ERP activities, DWR FloodSAFE Environmental Stewardship Program, and county-level conservation planning.

Ecosystem Restoration Program
CCDFW projects that contribute to this action include Dutch Slough (expected to go to construction in 2013), Lindsey Slough, Hill Slough and Liberty Island, the McCormack Williamson flood corridor, and the Putah Creek re-alignment in the Yolo Bypass. Two 2005 Prop 50 grants to develop habitat on working landscapes have also added habitat in the Delta and Delta watersheds upland in Yolo and Solano County. There were a number of agricultural habitat development projects on Delta islands. In Yolo and Solano Counties, nine Sacramento perch breeding ponds connected to the Delta were created in addition to miles of riparian habitat on Willow Slough and other agricultural water delivery channels.

FloodSAFE
DWR is developing a Conservation Strategy for the CVFPP, based on the Conservation Framework included in the Draft CVFPP. CCDFW is participating in the development of the Conservation Strategy to identify areas for restoration or recovery that will improve physical habitats in the selected corridors. DWR conducted an RFP in 2012 for restoration projects that will provide early implementation restoration for the Conservation Strategy. These projects should be funded and underway by 2015. In the long term, DWR will also fund and implement additional projects that will improve habitat corridors through their larger effort to develop a NCCP/HCP for the CVFPP. CCDFW is coordinating with DWR on the early stages of development for an NCCP to identify habitat corridor and floodplain improvement opportunities.

County Planning
CCDFW also participates at a regional level with multiple counties in the development of county-wide NCCPs. For example, NCCPs are being developed in Butte, Yuba/Sutter, and Yolo Counties. These NCCPs all share boundaries and are being developed in consideration of the restoration and recovery actions established in each individual plan. CCDFW is coordinating among multiple agencies to facilitate the NCCP process, and this will lead to improved physical habitats in the selected corridors going through multiple county boundaries.

Other Activities
The California Essential Habitat Connectivity Project (CEHCP) (Spencer et al. 2010) mapped corridors to provide ecological integrity of existing preserved areas and those areas critical to maintaining sustainable populations of terrestrial species. The CEHCP can be used to complement ERP activities within a statewide context.

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Action # Action Name Action Description	Type Other Responsible Organizations
3.3.2 Invasive Species	3-Recommended Actions
Control harmful invasive species at existing locations by 2012, and minimize or preclude new introductions and colonization of new restoration areas to non-significant levels.	CDFW, DWR, State Water Board, CDFA

Progress: 4 **Enacting Legislation:**

Status Description:

Prevention is the least ecologically harmful and most cost effective way to combat invasive species. Statewide invasive species preventative actions implemented by CCDFW within or that benefit the Delta Region include: assessing live bait as a vector and developing live bait regulations; developing a fishCCDFW fish hatchery Aquatic Invasive Species (AIS) monitoring and prevention protocol; developing and distributing AIS information in state hunting, fishing, and boating regulations and licenses; providing AIS outreach and education materials to the public, including direct mailings to boat owners, posting notifications at waterbodies, distributing informational cards at multiple locations statewide, and providing information through the media; providing watercraft inspection and decontamination trainings to local communities statewide; sponsoring Dreissenid mussel workshops; sponsoring AIS workshops for waterbody managers; initiating the development and implementation of AIS monitoring plans for high risk waters in the state; increasing inspections for AIS at California Department of Food and Agriculture Border Protection Stations; training and deploying CCDFW staff to survey and inspect waterbodies statewide; purchasing and deploying portable recreational equipment wash stations in each CCDFW Region; compiling AIS prevention and control programs; identifying reciprocal AIS inspection programs; and coordinating statewide AIS data.

CCDFW is actively involved with the Invasive Species Council of California (ISCC) and the California Invasive Species Advisory Committee (CISAC). ISCC helps coordinate and ensure complimentary, cost-efficient, environmentally sound, and effective state activities for invasive species as advised and recommended by CISAC.

CCDFW's Invasive Species Program publishes a quarterly newsletter, Eyes on Invasives, dedicated to informing the public about current invasive species activities being conducted in California.

CCDFWs Marine Invasive Species Program coordinates with the State Lands Commission to control the introduction of nonnative species from the ballast of ocean-going vessels. The program includes biological surveys to monitor the coastal and estuarine waters of the state to determine the level of invasion by nonnative species, ballast water inspections, and monitoring and research. Survey sites within the Delta include: the Ports of Sacramento and Stockton, San Pablo Bay, Suisan Marsh, and San Francisco Bay.

CCDFW's Lands Program actively controls many invasive plant species on CDFW-managed lands throughout the state using chemical and non-chemical methods.

Within the Delta Region, CCDFW controls invasive plants at Grizzly Island Wildlife Area (WA), Hill Slough, Peytonia Slough, and Yolo Wildlife Area.

CCDFW's final ERP Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta, Sacramento Valley and San Joaquin Valley Regions contains

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Action # Action Name Type

Action Description Other Responsible Organizations

conservation priorities for Non-Native Invasive Species. The DSC has incorporated actions from the July 2011 draft ERP Conservation Strategy into the Delta Plan, along with the supporting text. Including these actions in the Delta Plan has the potential increase coordination in the control of invasive species in the Delta.

CCDFW is working with DWR to develop two conservation measures for the Delta under the BDCP that address: (1) controlling the introduction and spread of invasive aquatic plant species within BDCP aquatic restoration areas and (2) preventing the introduction of new and reducing the spread of existing aquatic invasive species via recreational watercraft, trailers, and other equipment.

CCDFW has funded, published, and/or assisted in the preparation of several documents, including response plans, action plans, guidebooks, and education/outreach materials; and developed and initiated response, action, and education/outreach programs for managing specific aquatic invasive species (AIS) such as Dreissenid mussels (quagga and zebra mussels).

Since quagga mussels were first discovered in California in 1997, CCDFW's ongoing coordination efforts with federal, state, and local agencies and stakeholder groups to provide education, outreach, and training to the public and other entities, and implement watercraft inspection programs, has prevented quagga and zebra mussels from becoming established in the Delta.

Priority invasive species currently present in the Delta include aquatic weeds, both native and nonnative species. Some common Delta invasive aquatic plant species include Brazilian waterweed, water hyacinth, South American spongeplant, Eurasian watermilfoil, Carolina fanwort, Ludwigia spp., water pennywort, and coontail. The California Department of Boating and Waterways (CDBW) is authorized by law (Section 64 of the Harbors and Navigation Code [HNC]) to control Brazilian waterweed, water hyacinth, and South American spongeplant in the Delta, its tributaries, and Suisun Marsh. Additional weeds can only controlled by CDBW when they are added to the HNC through the legislative process. AB 763 (Buchanan), introduced during the 2013-2014 legislative session, proposes to create a scientific-based process in which Delta aquatic weeds can be added to the list of species to be treated by CDBW through a risk assessment performed by CCDFW, in-lieu of introducing legislation each time an invasive aquatic weed needs to be treated in the Delta. This process will provide greater coordination between CCDFW and CDBW to prioritize and control invasive aquatic plants in the Delta.

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Action # Action Name Action Description	Type Other Responsible Organizations
3.4.1 Instream Flows *Charge the Department of Fish and Game with completing recommendations for in-stream flows for the Delta and high priority rivers and streams in the Delta watershed by 2012 and for all major rivers and streams by 2018.*	2-Legal and Procedural Milestones Governor and Legislature, CDFW

Progress: 2 **Enacting Legislation:** Water Code Sections 85084.5 and 85087

Status Description:

The 2009 water legislation (SB7X-1) directed the State Water Board, in consultation with CCDFW, to submit to the Legislature by December 31, 2010 "a prioritized schedule and estimate of costs to complete instream flow studies for the Delta and for high priority rivers and streams in the Delta watershed, not otherwise covered by Section 85086, by 2012, and for all major rivers and streams outside the Sacramento River watershed by 2018. The State Water Board completed its report to the Legislature in December 2010, noting that the 2012 and 2018 deadlines are unrealistic for completing thorough instream flow studies. The report estimated that completing instream flow studies for the 138 streams identified would cost approximately $140 million ($32.5 million for the 2012 deadline and $107 million for the 2018 deadline).

Both SBX7-1 and PRC sections 10000-10005 require CCDFW to identify and evaluate stream flows and what is needed to protect fish and wildlife resources of the state. ERP's Proposition 84 budget provides funding for IFP instream flow studies on Sacramento/San Joaquin River Delta (Delta) tributaries. By submitting flow recommendations for Delta tributary studies to the State Water Board, CCDFW will meet the intent of the legislation and the State Water Board timeline for developing new flow criteria (refer to Water Code section 85086 (a) and (c)(1)). CCDFW will conduct and provide oversight on new flow studies on Delta tributaries as necessary to fulfill the mandates of SBX7-1 over the next 10 years (FY 2010/2011 through FY 2020/2021). CCDFW and the State Water Board have coordinated instream flow study priorities to avoid duplication between CCDFW's statewide list of 22 priority streams (Public Resources Code 10001) and the State Water Board's Instream Flow Studies for the Protection of Public Trust Resources: A Prioritized Schedule and Estimate of Costs (2010).

Six of the 22 priority streams on CCDFWs PRC 10001 statewide list are Delta tributaries. All six of these streams have flow studies underway. CCDFW staff have developed a Sacramento-San Joaquin River Delta tributary priority list to implement instream flow studies by FY 2020/2021. In 2011, IFP staff identified Butte, Deer, and Mill Creeks as important spring-run Chinook salmon (SRCS) tributaries of the Sacramento River that will benefit from instream flow studies. CCDFW staff has identified adult passage as limiting SRCS abundance in these streams. CCDFW has initiated a contract with the USFWS under ERP's Proposition 84 funding to complete instream flow studies on Delta tributaries. Fish passage assessment and hydraulic field data collection began in 2012 on lower Butte Creek. Completion of the study and submission of an instream flow recommendation is anticipated by 2016. CCDFW will amend the USFWS contract in 2013 to include a flow study on another Delta tributary yet to be determined. IFP staff is coordinating internally and with State Water Board staff to identify the second stream to be completed under the USFWS contract. IFP staff began scoping instream flow studies on Deer and Mill Creeks in 2012 under ERP's Proposition 84 funding. IFP staff is working with Region 1 staff on reconnaissance level surveys, existing study review, study design, stakeholder outreach planning, and preliminary data collection on Deer and Mill Creeks. IFP staff installed temperature loggers on Mill Creek in spring of 2013 to begin developing a temperature profile over time. Completion of the studies and submission of instream flow recommendations for Deer and Mill Creeks are anticipated by 2016.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Priority Sacramento-San Joaquin Rivers Delta tributaries for which the IFP may develop flow recommendations over the next 10 years under ERP's Proposition 84 funding include: Battle Creek, Clear Creek, Antelope Creek, Cottonwood Creek, Cow Creek, Bear River, Tuolumne River (current FERC study), Merced River (current FERC study), Middle Fork Feather River, and Stanislaus River (current USFWS study).

The CCDFW continues to maintain a partnership with the State Water Board to align priority setting, study availability, and data evaluation. CCDFW staff provides field methods training, promotes instream flow study implementation coordination, and participates in quarterly interagency meetings to coordinate activities and options on Sacramento-San Joaquin Rivers Delta tributaries and other instream flow studies with State Water Board staff. In 2011, CCDFW initiated development of an instream flow Quality Assurance (QA) Program under contract with the QA Research Group at Moss Landing Marine Laboratories. The QA Program is developing standard operation procedures (SOP) and fact sheets to provide instream flow study design tools and guidance. The SOPs will provide assistance for agencies, contractors, NGOs, and scientists to collect defensible, comparable instream flow data that meets CCDFW's needs under mandates in PRC 10000-10005. One SOP for critical riffle analysis was completed and made available for use in 2012. Four additional SOPs were developed in 2012 and will be completed in 2013 for: 1) measuring discharge; 2) collecting stream bed topography and water surface elevation data; 3) conducting flow duration analyses; and 4) conducting wetted perimeter analysis.

CCDFW instituted its "Instream Flow Program" website in 2010 (http://www.dfg.ca.gov/water/instream_flow.html). CCDFW continues to seek funding through grant programs and other efforts for implementation of the CCDFW Instream Flow Program (IFP). The 2012 CCDFW IFP Annual Report is due for release in June 2013. The 2011 annual report can be found on the websit.

3.4.7 Delta Waterway Geometry | 3-Recommended Actions

Reconfigure Delta waterway geometry by 2015 to increase variability in estuarine circulation patterns. | CDFW, DWR, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Section 85302(e)

Status Description:

Water Code Section 85302(e): "The following subgoals and strategies for restoring a healthy ecosystem shall be included in the Delta Plan.... (4) Restore Delta flows and channels to support a healthy estuary and other ecosystems."

• Cross Channel gate operations are being managed under the OCAP Biological Opinions to avoid entrainment of Sacramento River salmonids into the central Delta.
• Two-Gates and the effectiveness of barges as barriers: IEP is conducting turbidity studies associated with early winter outflow to assess Delta smelt movement. A report on initial field investigations is in preparation. Additional field work is planned for winter 2012-2013. These studies are not assessing the effectiveness of flow control structures since none are in place or planned to be constructed with the abandonment of the Two Gates Project.
• DWR is testing a nonphysical barrier at Georgiana Slough. Reslts are pending.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

NTA03 In-stream Flow Analysis — 1-Near-Term Actions

Accelerate completion of in-stream flow analyses for the Delta watershed by the Department of Fish and Game. — CDFW, USFWS, NMFS

Progress: 2 **Enacting Legislation:** Water Code Section 85084.5

Status Description:

The 2009 water legislation (SBX7-1) directed CCDFW, in consultation with USFWS and NMFS, to develop and recommend to the State Water Board Sacramento-San Joaquin Rivers Delta tributaries flow criteria and quantifiable biological objectives for aquatic and terrestrial species of concern dependent on the Delta by November 2010. CCDFW completed its report "Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta" on December 3, 2010.

CCDFW is preparing the 2012 Instream Flow Program (IFP) annual report for release in June 2013. The annual report includes a general work plan for 2013. The 2011 annual report can be found on the IFP webpage at http://www.dfg.ca.gov/water/instream_flow.html.

New instream flow studies on Sacramento-San Joaquin Rivers Delta tributaries began in the fall of 2011 and will extend through 2021. Under ERP's Proposition 84 funding, CCDFW hired three permanent staff and two scientific aides to conduct SBX7-1 studies. In 2012, IFP staff obtained necessary field and data collection equipment, completed training in field data collection, equipment use, field safety, and software modeling. IFP staff has also developed a work plan and schedule for evaluating and recommending instream flow studies for the next 10years. CCDFW continues to coordinate with the State Water Board to maintain and update the Sacramento-San Joaquin River Delta tributaries priority streams list (http://www.dfg.ca.gov/water/instream_flow.html). IFP staff has completed a work plan for evaluating and implementing the Sacramento-San Joaquin Rivers Delta tributary instream flow studies through SBX7-1. The USFWS, under CCDFW contract began work in fall 2012 to complete the first Sacramento-San Joaquin Rivers Delta tributary instream flow study on lower Butte Creek by 2016. Also in 2012, the IFP completed data collection on Auburn Ravine, a tributary to the Sacramento River in Placer County, for an instream flow study initiated by CCDFW Region 2. In 2012, the IFP initiated scoping for instream flow and fish passage studies on Deer and Mill Creeks. IFP staff installed temperature loggers on Mill Creek in spring of 2013 to begin developing a temperature profile over time.

See also 3.4.1, Instream Flows.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
NTA08	**Near-term Ecosystem Restoration**	1-Near-Term Actions
Advance near-term ecosystem restoration opportunities.		DWR, DC, CDFW, CVFPB

Progress: 3 **Enacting Legislation:** Water Code Sections 85085(c) and (d)

Status Description:

The 2009 water legislation (SBX7-1) directed CCDFW to expeditiously move ahead with the DVSP near-term actions and assist in implementing early action ecosystem restoration projects. These projects include, among others, the Dutch Slough and Meins Landing tidal marsh restorations.

In coordination with the other ERP implementing agencies (USFWS and NMFS), CCDFW is finalizing the ERP Conservation Strategy for a target release in June 2013 to help guide restoration activities in the Delta, as well as the Sacramento and San Joaquin Valleys. The ERP Conservation Strategy has identified near-term land acquisition and habitat enhancement priorities for the Delta. These projects were identified based on habitat types that fit into upland, intertidal, floodplain, and subsided/deep open water classifications and would make a contribution toward meeting the ERP Goals and Objectives. Restoration of intertidal and shallow subtidal areas continues to be a very high priority for the Delta while considering potential concerns about promoting invasive species and the methylation of mercury in sediments.

Many of the following near-term ecosystem restoration actions are included in the FRPA Implementation Strategy (see 3.1.2, Tidal Habitat Restoration). In addition, many of these projects have funding provided by ERP and are considered for early implementation under BDCP. Lead agency and FRPA status is in parentheses. For map of FRPA related projects, see http://www.water.ca.gov/environmentalservices/docs/frpa/FRPA_and_Other_Restoration_Projects_Map_v2.pdf.

In the Cache Slough Complex:
Prospect Island Tidal Habitat Restoration (FRPA). Status: DRERIP evaluation of original 15 alternatives is complete (see https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=59671)Phase 2 Hydraulic modeling of 10 restoration alternatives to aid final selection of design alternatives is underway, ongoing interim land management, levee inspections and repair plan, invasive plant species analysis report complete. Challenges: infeasible to permit a breach of the Sacramento Deep Water Ship Channel levee; need to maintain access to adjacent property following levee breach; trespassing and vandalism; legal access issues with adjoining property owners; Ryer Island levee seepage.

Liberty Island/Cache Slough Enhancement Plan (CCDFW/potential FRPA). Status: ERP funded Breach III studies at Liberty Island, final report is expected 2013. Continued fisheries monitoring through IEP. Land management plan for Liberty Island to be completed in 2014.

Lindsey Slough/Calhoun Cut Freshwater Tidal Marsh Enhancement (CCDFW/potential FRPA). Status: ERP has provided funding for implementation and anticipates providing funding for the construction planned to initiate in 2014. Feasibility evaluation complete, 100% designs completed, Mitigated Negative Declaration to be released in summer 2013. Permits to be finalized by summer of 2013. Challenges: Solano County Water Agency has concerns over increased primary production/nutrients in the system and the negative effects it would have on water quality near the Barker Slough Pumping Plant.

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Lower Yolo Ranch Aquatic Habitat Restoration (SWFCA). Status: Restoration to be done by State Water Contractors; CCDFW coordinating for project planning and permitting. Draft EIR released April 2013, Available on line at http://www.sfcwa.org/2013/04/22/drafteir-lower-yolo-ranch-tidal-restoration-project/

Dutch Slough (DWR). Dutch Slough is an area of about 1180 acres that was leveed in the 1800s for agricultural production, primarily grazing and dairy operations located in the West Delta in northeastern Contra Costa County. Status: ERP provided over $25 million in funding for the acquisition, permitting and planning phases. Phases 1 and 2, which included planning & permitting, have been completed. DWR has applied for construction funding assistance from federal and state agencies for Phase 3, and expects to begin construction in late 2013. Phase 3 includes restoration of natural habitat on two of the three parcels, Emerson (426 acres) and Gilbert (305 acres). Tasks include: raising marsh plain elevations, realigning the Marsh Creek channel to its historic position on Emerson parcel, restoring full tidal exchange to Emerson and Gilbert, and enhancing recreation access. Burroughs parcel cannot be restored without first addressing erosion and flood potential that inundation poses to a public roadway. Restoration of the Burroughs parcel would follow in a subsequent phase and require additional funding.

Little Holland Tract Management and Enhancement (CCDFW & USACE/ potential FRPA). Status: Land belongs to the USACE; CCDFW working collaboratively with USACE on management and habitat enhancement of Little Holland Tract as part of the Cache Slough Complex.

In Suisun Marsh:
Hill Slough Tidal Marsh Restoration Project (CCDFW/potential FRPA). Status: EIR and Management Plan will be released together as public draft in 2013; construction date is on hold, pending funding. ERP has provided funding for planning and permitting phase, and grant is extended an additional year to June 2014. Challenges: Retrofit of PG&E towers and raising elevation of Grizzly Island Road to accommodate tides and flooding. See: http://dfg.ca.gov/ERP/erp_proj_hill_slough.asp

Meins Landing Tidal Marsh Restoration (DWR/potential FRPA). Status: In planning & conceptual design phase. Challenge: Maintaining access for repair and maintenance of existing gas pipeline.

Rush Ranch (Solano Land Trust). Status: In planning and conceptual design. Initial Study and Mitigated Negative Declaration will begin in 2013. Developing a system-wide management plan for invasive weed species; permitting in progress. Challenge: working through difficulties of permitting tidal marsh restoration. Construction challenge: control of invasive non-native perennial pepperweed (Lepidium latifolium) and general weed management solutions that avoid impacts to listed native plants.

Tule Red Tidal Marsh Restoration (SWFCA). Status: Project description and FAST consultation in progress. Permitting will start in 2013 and construction is planned for 2014.

Overlook Club / Property 322 Tidal Marsh Restoration (DWR, FRPA). Status: In Planning and Conceptual Design. The property was purchased in February 2013 and restoration is planned for summer of 2016. Challenge: Developing a plan to control invasive Phragmites australis and prevent its re-establishment after restoration.

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Blacklock Restoration project (DWR). Restoration is complete. ERP has provided funding for implementation and post-construction monitoring for mercury. http://www.water.ca.gov/suisun/docs/Blacklock%20Restoration%20Plan_Final_062807.pdf

Other restoration projects: Fremont Weir Fish Passage Enhancement, Tule Canal Fish Passage Enhancement, Lisbon Weir Fish Passage Enhancement, and Putah Creek Restoration and Enhancement (potential FRPA). See project descriptions in 3.1.1 Floodplain Inundation

Battle Creek Salmon and Steelhead Restoration Project (DWR & CCDFW). In 1999, the Bureau of Reclamation (Reclamation) received $28 million Federal CALFED Bay-Delta Program, ERP funds for project planning and implementation. ERP transferred an additional $26,812,500 to Reclamation in 2008. Recent accomplishments for the Restoration Project included work on the fish screen and ladder construction at the Eagle Canyon and North Battle Creek Feeder diversion dams, as well as the Inskip Powerhouse penstock bypass and tailrace connector. Completed June 2012. Information available: http://www.battle-creek.net/ and http://dfg.ca.gov/ERP/erp_proj_battle_ck.asp

McCormack-Williamson Tract and Staten Island. McCormack-Williamson Tract and Staten Island are part of a long-term coordination effort with DWR. An EIR has been completed to allow the island's levees to overtop and flood the island during storm events. The project is designed to implement flood control improvements that encourage establishment of aquatic and terrestrial habitats, native species, and ecological processes. Project implementation will restore and enhance approximately 1,650 acres of various habitat types, including floodplain intertidal marsh, riparian, and scrub-shrub. ERP has awarded over $30 million to The Nature Conservancy for implementation of this project. FRPA may provide funding for this project, if agencies approve credits under OCAP for delta smelt food web support.

Delta Working Landscapes. ERP funded project. The project offers an innovative program of farm habitat improvement and environmentally friendly agriculture practices that will benefit fish and wildlife, reduce erosion and sediment runoff, and improve water quality. These pilot programs are intended to serve as a catalyst for adoption by other farmers on a larger scale throughout the Delta. Six farmers have allowed Ducks Unlimited to convert 311.5 acres of agricultural lands to seasonal managed wetlands for waterfowl use. Another six farmers allowed for native planting on 6.5 miles of irrigation ditches and landside levees to minimize erosion, sediment runoff and to improve water quality.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Department of Food and Agriculture

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Action # Action Name Action Description	Type Other Responsible Organizations
2.2.1 Delta Agriculture Support	3-Recommended Actions
Establish special Delta designations within existing federal and state agricultural support programs.	CDFA, DPC, DC, USDA

Progress: 2 **Enacting Legislation:** Water Resources Code Section 85301(c)(2)

Status Description:

The 2009 water legislation directed CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture. On March 21, 2011, in accordance with the directive of the 2009 water legislation (SBX7-1), CDFA presented to the DPC and the DSC its evaluation of policy alternatives to benefit agriculture in the Delta. The report was prepared for CDFA by the University of California, Agricultural Issues Center. The report examined the potential for agritoursm, crop changes, biofuels, and ecotourim to expand the local agricultural economy. (See also Action 2.2.3, Delta Agricultural Markets.)

Conservation Partners. Conservation Partners is a partnership between the USDA's NRCS, the National Fish and Wildlife Foundation (NFWF) and other regional partners. The purpose of this program is to provide grants for technical assistance to farmers, ranchers, foresters and other private landowners to optimize wildlife habitat conservation on private lands. Conservation Partners looks to increase the effectiveness of Farm Bill assistance funded through programs such as Wildlife Habitat Incentives Program (WHIP), Environmental Quality Incentives Program (EQIP), Conservation Reserve Program (CRP) and others through technical assistance to private landowners in targeted Program Priority Areas (PPAs).

Bay Delta is a Priority Area. In 2011, the California Bay Delta region became one of the twelve conservation initiatives nationally designated by USDA's Natural Resources Conservation Service (NRCS) as a targeted PPA. As such, the region is eligible for accelerated assistance and funding to agricultural producers who seek to voluntarily restore and enhance the natural resources through water conservation, water quality work, and habitat restoration.

UDSA Provides Funds. In January 28, 2013 the USDA's NRCS in California announced that $1.5M is available to improve on-farm water resources in San Joaquin County. This funding is anticipated to help eligible farmers implement water quality and irrigation efficiency practices in selected San Joaquin County watersheds. This funding will also assist growers to reduce water losses on-farm, and to reduce nutrient, sediment and chemical loads at the edge of fields.

USDA Farmers' Market Program. The USDA's Farmers' Market Promotion Program awarded the Discover the Delta Foundation a $40,000 grant. The Delta Farmer's Market, owned and operated by the Discover the Delta Foundation, is the first phase of the larger Delta Discovery Center project on a five-acre site in Isleton near the intersection of highways 4 and 160. When completed, an 8000 square-foot educational center will include a model of the Delta, a wine tasting room, farmers' market, classrooms, and a museum showcasing the agricultural and cultural history of the region. Discover the Delta is a nonprofit entity whose mission is to promote, protect, and preserve the Delta by providing objective and science-based information so that the Delta can be better understood, enhanced, and enjoyed. One of its goals is to preserve and enhance the Delta's agricultural resources.

California Delta Road Sign Project. DPC and Other Agencies in partnership are implementing the California Delta Road Sign Project. The purpose of the project is to increase the awareness of the California Delta by erecting welcoming signs at road and highway entrances to the Delta. The project is funded by the Delta Protection Commission, Contra Costa County Board of Supervisors and Public Works Department, Sacramento County Board of Supervisors and

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Actions Status by Lead Agency

Action #	Action Name	Type
Action Description		Other Responsible Organizations
Public Works Department, Solano County Board of Supervisors and Public Works Department, San Joaquin County Board of Supervisors and Public Works Department, Yolo County Board of Supervisors and Public Works Department and the California Department of Transportation.		

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Action # Action Name Action Description	Type Other Responsible Organizations
2.2.2 Agricultural Sustainability Research	3-Recommended Actions
Conduct needed research and development for agricultural sustainability in the Delta.	CDFA, DPC, USDA

Progress: 1 **Enacting Legislation:** Water Code Section 85301(c)(2)

Status Description:

The 2009 water legislation directed the CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture.

CFDA's Sustainability Priorities. CDFA's "California Agricultural Vision: Strategies For Sustainability" (December 2010) identified 12 key strategies that continue to guide the planning, design and implementation of all CDFA projects and programs:
1. Improve Access to Safe, Healthy Food for All Californians
2. Ease the Burden of Regulation on Agriculture While Maintaining Health, Safety and Environmental Standards
3. Secure an Adequate Supply of Water for Agricultural Purposes
4. Assure a Strong Labor Force through Fairness to Agricultural Workers and Employers
5. Effectively Detect, Exclude and Control Invasive Species
6. Adopt a Policy of Conserving Agricultural Land and Water Resources
7. Expand Environmental Stewardship on Farms and Ranches
8. Promote Renewable Energy & Substitutes for Fossil-Based Inputs
9. Assure Agricultural Adaptation to Climate Change
10. Promote Robust Regional Markets for All California Producers
11. Cultivate the Next Generation of Farmers and Ranchers
12. Promote Agricultural Research that Anticipates 21st Century Challenges

CDFA's Marketing Objectives. In January 2013, the CDFA released its "CDFA Strategic Plan: 2013-2018." Goal One is to promote and protect the diverse local and global marketability of the California agricultural brand, which represents superior quality, value, and safety. The strategies and objectives for Goal One include:
A. Strengthen CDFA's public outreach and awareness efforts for programs and activities that assist in the creation of new and the promotion of existing markets.
B. Partner with the University of California, Davis' Agriculture and Natural Resources Small Farm Program, Buy California Marketing Agreement, and organic food entities to promote California specialty crop products.
C. Open new markets, retain existing markets, and prevent disruption through data collection.'
D. Optimize local and global partnerships to promote California projects through education and cooperation.
E. Provide quarterly and annual reports online summarizing CDFA program updates, accomplishments and permanent achievements.

UC-ANR Report Expected. The State Board of Food and Agriculture has asked the Agriculture & Natural Resources Division of the University of California (UC-

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

ANR) to conduct a study of California's long-term agricultural land, water, and other resource needs, based on future demand for food, fiber, renewable energy, and ecosystem services, and on the influence of urbanization, water availability, climate change, energy costs, technology, and other factors on future agricultural productivity and production capacity. They are still working on this report which is due out in 2013.

Delta research publications by the Agriculture & Natural Resources Division of the University of California can be more easily accessed. Http://ucanr.edu/sites/deltacrops/

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Action # Action Name Action Description	Type Other Responsible Organizations
2.2.3 Delta Agricultural Markets	3-Recommended Actions
Establish new markets for innovative agricultural products and enterprises in the Delta.	CDFA, DPC, USDA

Progress: 1 **Enacting Legislation:** Water Code Section 85301(c)(2)

Status Description:

The 2009 water legislation (SBX7-1), directed CDFA to prepare and submit a proposal to the DPC to establish market incentives and infrastructure to protect and enhance the economic and public values of Delta agriculture.

CDFA Policy Alternatives. In March 2011, the CDFA presented to the DPC and the DSC its report "Evaluations of Policy Alternatives to Benefit Agriculture in the Sacramento-San Joaquin Delta of California" written and researched by Daniel A. Sumner and John Thomas Rosen-Molina University of the California Agricultural Issues Center. The report examined the potential for agritoursm, crop changes, biofuels, and ecotourim to expand the local agricultural economy. The report found, among other conclusions, that additional public funds to support local marketing were likely to provide only limited additional revenue for Delta agriculture. Most Delta crops are not suited for local food markets and unless longer term environmental and infrastructure concerns are addressed, investments in permanent tree and vine crops or in local marketing infrastructure are unlikely to be economically feasible. Where there are regulatory barriers to production for local markets, local authorities should investigate rules to assure that untoward impediments that restrict growth of these markets are removed.

ESP Agricultural Recommendations. The DPC's March 2011 "Economic Sustainability Plan" (ESP) included important baseline information to protect and enhance Delta agricultural activity and productivity. ESP recommendations included:
1. Maintain and enhance the value of Delta agriculture. The potential of other industries to replace any loss in economic output from Delta agriculture is limited.
2. Limit the loss of productive farmland to urbanization, habitat, and flooding. Continuing shifts of Delta agriculture to higher-valued crops and more value-added activities will compensate if land loss is not too great.
3. Protect Delta water quality and water supplies for agriculture.
4. Support growth in agritourism. Agritourism is currently a very small contributor to the Delta's agricultural value, but is fast growing. Local area plans should support agritourism where appropriate.
5. Support local value-added processing of Delta crops. Regulations from local, state and federal agencies such as FEMA that inhibit investment in value-added processing should be examined and streamlined where possible.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Department of Transportation

6.1.3	**Highway Protection Strategies**	3-Recommended Actions
Conduct a comprehensive analysis of the costs and benefits of highway protection strategies, and adopt a policy based on its findings by 2012.		Caltrans, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Section 85307(c)

Status Description:

The 2009 water legislation suggests that the DSC, "...in consultation with the Department of Transportation, may address in the Delta Plan the effects of climate change and sea level rise on the three State highways that cross the Delta." Caltrans provided comments to the DSC for the Delta Plan.

Caltrans Assessment Reports. Caltrans has completed the following statewide assessment and guidance reports:
- "Vulnerability of Transportation Systems to Sea Level Rise, Preliminary Assessment (2009)," which assesses the vulnerability of the State's transportation system to sea level rise due to climate change.
- "Guidance on Incorporating Sea Level Rise," which analyzed the costs and benefits of highway protection strategies (May 2011), which sets forth the methodologies to be followed to determine and justify whether and to what extent mitigation for sea-level rise is applicable to specific projects.
- "Caltrans Activities to Address Climate Change Reducing Greenhouse Gas Emissions and Adapting to Impacts" (April 2013), which provides an overview of Caltrans activities to reduce GHG emissions and adapt the state's transportation system for the impacts of climate change. The report says that as of 2009, approximately 1,900 miles of California's roadways were at risk of a 100-year flood event; projected sea level rise of 55 inches would increase the roadway at risk to approximately 3,500 miles.

State Route 12. In November 2012 Caltrans published its "SR-12 Comprehensive Evaluation and Corridor Management Plan (Comprehensive Evaluation)."The Comprehensive Evaluation found that nearly the entire corridor is subject to the threat of natural impacts including sea-level rise and the area critically depends on its more than 1,000 miles of levees for protection. Projected impacts of sea level rise would inundate Delta areas west of Rio Vista including Suisun City, Fairfield, and segments of SR-12 between Rio Vista and the I-5 interchange and access to the Travis Air Force Base. Also, because water courses in the area are subject to tidal conditions, sea-level rise could exacerbateflood hazards. Sea-level rise, unless mitigated, is also expected to inundate the Delta areas of Sacramento County and San Joaquin County.

State Route 160. As a first step in developing a SR-160 Corridor Management Plan (CMP), the "Transportation Concept Report for SR-160" was issued August 29, 2011. The Plan notes that, according to the 2009 "Vulnerability of Transportation Systems to Sea Level Rise Preliminary Assessment," the SR-160 Delta corridor is most likely to be affected by an expected 55-inch rise in the sea level by 2100. Caltrans' stated intent is to assess SR-160 project vulnerability in its CMP and reduce anticipated risks associated with sea level rise. No CMP for SR-16- has been issued.

State Route 4. The "Corridor System Management Plan for State Route (SR) 4" (October 25, 2010) did not include a discussion of sea level rise.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Department of Water Resources

3.2.3 Flood Conveyance Capacity Expansion | 3-Recommended Actions

Immediately use the Central Valley Flood Protection Plan to identify areas of the San Joaquin River within and upstream of the Delta where flood conveyance capacity can be expanded. | DWR, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Section 85306

Status Description:

In June 2012, the Central Valley Flood Protection Board approved the Central Valley Flood Protection Plan (CVFPP), which identifies flood conveyance capacity expansion options in the North Delta and South Delta. The Plan provides an overall framework for flood management. DWR is now conducting regional studies, which will examine flood bypass opportunities on the San Joaquin River. On May 1, 2013, DWR issued letters of commitment to fund six regional flood management studies, including three on the San Joaquin River. When the regional plans are complete, DWR will incorporate feasible components of the regional plans in the 2017 CVFPP Update that are consistent with the State Systemwide Investment Approach as defined in 2012 CVFPP.

Paradise Cut Flood Bypass Expansion Project. The South Delta Water Agency is working with DWR and local landowners to expand the Paradise Cut Bypass to route flood flows away from urban areas in Lathrop and Stockton along the San Joaquin River and allow for a greater amount of flow to enter the Cut during high flow times. The project includes necessary dredging and levee work downstream of the Cut to safely pass the additional flow into the deeper Delta channels at acceptable or no additional risk to lands of that area. The project will include overflow and tidal habitat where feasible in coordination with fishery agencies.

Http://www.water.ca.gov/cvfmp/regionalplan/

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

3.3.1 Fish Entrainment — 3-Recommended Actions

Reduce fish kills in Delta pumps by instituting diversion management measures by 2009, implementing near-term conveyance improvements by 2015, and relocating diversions. — DWR, Reclamation, Others?

Progress: 2 **Enacting Legislation:**

Status Description:

The courts have implemented requirements for SWP and CVP diversions to reduce impacts to listed species. DWR and Reclamation are implementing those measures as outlined in NOAA's National Marine Fisheries Service (NMFS) Biological Opinion and subsequent stipulation agreements. In compliance with the requirements of the NMFS Opinion, DWR has tested non-physical barriers at the head of Old River and Georgiana Slough to reduce entrainment. Initial results of the field evaluations showed reduced entrainment, but further analysis is ongoing to evaluate potential increases in predation and barrier performance. DWR is evaluating the feasibility of other engineering solutions to reduce entrainment of salmonids into the interior Delta. The final report for the Release Site Predation study was completed in 2010 and included specific recommendations to increase survival of salvaged fish. In related work, DWR is studying predation near the pumps to determine reduction targets and guide future management actions. In 2012, the Department also undertook juvenile steelhead and salmon studies using acoustic telemetry to study route selection probabilities and survival under different flow scenarios in the San Joaquin River and South Delta.

The Biological Opinion includes diversion management actions such as Delta Cross Channel (DCC) gate closures and export restrictions for OMR management is the primary way that entrainment is being managed. Through these RPAs exports are managed to minimize entrainment and alteration of migratory pathways. In support of DCC gate closures, the Bureau of Reclamation released an Environmental Assessment and a Finding of No Significant Impact for proposed 10-day closures during the first half of October, 2012-2016. A DCC closure did not occur in 2013 during the Mokelumne River pulse flow due to water quality issues in the Delta associated with low flows.

Other RPA actions not directly related to entrainment reduction measures include: (1) initiating efforts to modernize and build additional salvage release sites to reduce predation and increase salvaged fish survival, (2) Initiating design and construction of a fish science laboratory at the SWP John E. Skinner Delta Fish Protective Facility (SDFPF) to support fish research activities related to SWP operations and compliance, (3) initiating real-time coded wire tag reading and reporting at the SWP and CVP salvage facilities to support delta water operations management. Further actions are also incorporated into the BDCP process.

Salvage
For the Water Year 2012, fish salvage decreased at both the SDFPF and the CVP's Tracy Fish Collection Facility (TFCF). TFCF salvage was 475,082, a marked decrease from the previous year and below the previous record low of 1,318,613 set in 2010. During the 2011 Water Year, annual fish salvage of all fish species combined at the TFCF was high at 8,724,498. Annual salvage at the SDFPF in 2012 was 1,607,286, nearly a 50% reduction from the number salvaged in 2011 (3,092,553).

Mokelumne River Projects

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Action # Action Name | Type

Action Description | Other Responsible Organizations

Beginning in fall 2009 the Lower Mokelumne River Partnership implemented three key management actions designed to improve survival and returns of fall-run Chinook salmon to the Mokelumne River while reducing stray rates to other Central Valley rivers (primarily the American River). The management actions included moving the release location for Mokelumne River Fish Hatchery Chinook production, initiating fall pulse/attraction flows, and working with USBR to initiate temporary closures of the Delta Cross Channel. Additional measures, such as minimizing predators below Woodbridge Dam, and gravel augmentation in the lower Mokelumne have also been undertaken.

Based on four years of data, it appears that the combined effects of the key management actions have achieved the intended goals. In each of the past four years Chinook returns to the Mokelumne River have improved, and in 2011 the return was the highest observed since 1940 with an escapement of more than 18,000 salmon. Stray rates to the American have markedly declined from more than 50% in 2009 to less than 10% in 2011. Although the Central Valley as a whole saw an increase in escapement, the San Joaquin Basin returns declined by approximately 9% from 2011. Mokelumne River escapement was well above 2009 and 2010 counts, with 12,027 adults returning in 2012, but short of the 2011 count of 18,596. Based on these initial results, EBMUD is working with its partners (CDFW, USFWS, USBR) to develop a 5-year study plan to further evaluate the effectiveness of the management actions and identify potential operational constraints.

3.5.2 Drinking Water Intake Relocation | 3-Recommended Actions

Relocate as many Delta drinking water intakes as feasible away from sensitive habitats and to channels where water quality is higher. | DWR and local water agencies

Progress: 4 **Enacting Legislation:**

Status Description:

Contra Costa Water District - CCWD completed its Alternate Intake Project in July 2010 (Near-term Action #5).

City of Stockton Water Project. - The initial phase of the City of Stockton Delta Water Project is complete. The project will initially divert and treat 30 million gallons per day (mgd) from the San Joaquin River on Empire Tract. This water will serve approximately one-third of Stockton's water needs. At full capacity (2050), the plant can treat 160 mgd.

North Bay Aqueduct - DWR has proposed to implement the North Bay Aqueduct Alternate Intake Project (NBA AIP) to improve water quality and to provide reliable deliveries of State Water Project (SWP) supplies to its contractors, the Solano County Water Agency (SCWA) and the Napa County Flood Control and Water Conservation District (Napa County FC&WCD). Public Scoping for the EIR was completed in January 2010. The Draft EIR has been postponed until late 2013 to allow time to coordinate water quality analysis and modeling with the ongoing BDCP analysisis expected in late 2012.

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Action # Action Name Action Description	Type Other Responsible Organizations
4.1.1 Statewide Water Use Efficiency	3-Recommended Actions
Improve statewide water use efficiency and conservation.	DWR, State Water Board, CUWCC, AWMC, Others

Progress: 4 **Enacting Legislation:** Water Code Sections 10608, 85303

Status Description:

The 2009 water legislation SB X7-7 was enacted in November 2009 mandating water conservation targets and efficiency improvements for urban and agricultural water suppliers, respectively. The bill also requires that DWR, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.

Urban Water Conservation. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015. Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011 and include those targets in its 2010 UWMP (due July 2011). Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

Agricultural Water Conservation. Agricultural water suppliers shall prepare and adopt agricultural water management plans by December 31, 2012, and update those plans by December 31, 2015, and every 5 years thereafter. On or before July 31, 2012, agricultural water suppliers shall measure the volume of water delivered to customers (DWR shall adopt regulations that provide for a range of options that agricultural water suppliers may use to comply with the measurement requirement); adopt a pricing structure for water customers based at least in part on quantity delivered; and implement additional efficient management practices. Effective 2013, agricultural water suppliers who do not meet the water management planning requirements established by this bill are not eligible for state water grants or loans.

DWR developed work plans for the 18 actions in the legislation for which DWR is assigned as the lead agency. Seven of the 8 urban actions are complete or ongoing. The revised funding guidelines will be initiated in 2015. Four of the 7 agricultural actions are complete; the remaining 3 will be initiated in 2013. Two of the 3 other activities, including development of the standardized water use reporting form, are underway. To meet these requirements, DWR formed an Urban Stakeholder Committee (USC) and an Agricultural Stakeholder Committee (ASC). DWR also sought public input through public workshops, the SB X7-7 website, a Commercial, Industrial, and Institutional (CII) Task Force, and the rulemaking process. DWR also convened an Agency Team (AT) to seek general advice in the implementation of the SB X7-7 requirements.

http://www.water.ca.gov/wateruseefficiency/sb7/projects.cfm

See 4.1.2, Urban Water Demand, and 4.1.3, Agricultural Water Use Efficiency, for specific actions status.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

4.1.2 Urban Water Demand	2-Legal and Procedural Milestones
Reduce urban per-capita water demand through specific recommended actions.	DWR, CUWCC, Others

Progress: 4 **Enacting Legislation:** Water Code Section 10608

Status Description:

The 2009 water legislation included SBX7-7, which establishes methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the overall goal of a 20-percent reduction.

In October 2010, DWR published "Technical Methodologies for Calculating Urban Water Use Targets." In February 2011, DWR published "Provisional Method 4 for Determining Water Use Targets." DWR has also published "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" incorporating the requirements of SBX7-7 (March 2011).

Final regulations regarding the exclusion of certain process water from water use calculations at commercial, industrial, and institutional facilities were published on July 8, 2011. The Commercial, Institutional and Industrial (CII) Task Force met 13 times to develop water use Best Management Practices for the CII sector and a report to the Legislature (http://www.cuwcc.org/2column.aspx?id=16620).

Updated Urban Water Management Plans were due to DWR from water providers by July 2011. DWR submitted its first urban water management report to the Legislature on June 11, 2012. This report summarized the evaluation of 381 UWMPs submitted (out of 448 urban suppliers known to DWR). Fifteen water suppliers have a five-year baseline water use under 100 gallons per capita per day (gpcd). DWR's analysis of 342 of the UWMPs showed a statewide target water use reduction of 16.2% to 166 gpcd by 2020. As of January 2013, 397 UWMPs have been submitted to DWR. The 2012 DWR report noted that a second report would be submitted when a majoirty of the UWMPs have been reviewed to provide a summary of urban water use and conservation.

Assembly Bill AB 1420 (2007) (CWC §10631.7) directed DWR to form an Independent Technical Panel (ITP) to provide recommendations to DWR and the Legislature on new demand management measures, technologies and approaches to water use efficiency. DWR convened the ITP on May 2, 2013 to discuss the ITP charter and meeting schedule with the goal of submitting the ITP recommendations to the Legislature by the end of 2014. The Panel members have already been named. The ITP will meet once every 6 to 8 weeks in 2013 and 2014.

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Action # Action Name Action Description	Type Other Responsible Organizations
4.1.3 Agricultural Water Efficiency	3-Recommended Actions
Ensure the most efficient use of water in agriculture.	DWR, AWMC, CDFA, Reclamation, USDA, Others

Progress: 4 **Enacting Legislation:**

Status Description:

In July 2011, DWR prepared, and the Office of Administrative Law (OAL) approved, an emergency agricultural water measurement regulation. On July 11, 2012, OAL approved the permanent Agricultural Water Measurement Regulation (Title 23, Division 2 of the California Code of Regulations, Chapter 5.1, Sections 597, 597.1, 597.2, 597.3, and 597.4) along with the Aggregated Farm-Gate Delivery Reporting Form. The Regulation became effective July 11, 2012.

To comply with provisions of the statute, agriculture water suppliers must submit an Agricultural Water Management Plan (AWMP) by December 31, 2012, again on December 31, 2015, and every five years thereafter. DWR has completed a guidebook and template for preparing Agricultural Water Management Plans. DWR has received 21 AWMPs.

The Agricultural Water Management Council, a voluntary organization formed in the 1990s to develop best management practices has disbanded. DWR will work with agriculture interests and others to update the efficient water management practices based on information in the AWMPs beginning in August 2013.

In May 2013, DWR announced its final proposed Proposition 50 grants for agricultural water management, including $10.6 million for implementation and $4.2 million for research, pilot programs, training, outreach, and technical assistance.

http://www.water.ca.gov/wateruseefficiency/

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
4.2.5	**Water Shortage Contingency Plans**	3-Recommended Actions
Require that all water purveyors develop an integrated contingency plan by 2015 in case of Delta water supply curtailments or drought.		Governor and Legislature, State Water Board, DWR

Progress: 3 **Enacting Legislation:** Water Code Section 85021

Status Description:

DWR completed the first statewide drought contingency plan in November 2010 as part of the California Water Plan. DWR is updating the drought contingency plan as part of Water Plan Update 2013 to ensure that it covers preparing for, responding to, and recovering from a drought, including documenting activities and lessons learned from prior droughts including the six-year event of 1987-92 and the more recent 2007-09 drought. An important focus of the updated contingency plan is an emphasis on drought preparedness. The plan identifies important gaps related to preparedness – besides the lack of funding for operational-scale preparedness and response actions – such as absence of skillful seasonal to inter-annual drought forecasting ability, limited understanding of statewide groundwater storage conditions, and lack of effective tools for helping vulnerable small water systems in rural areas.

DWR supports Integrated Regional Water Management planning through guidance, grants, and technical assistance. According to the DWR "Propositions 84 & 1E Integrated Regional Water Management (IRWM) Guidelines" (August, 2010), all proposals must "effectively address long-term drought preparedness by contributing to sustainable water supply and reliability during water shortages. Drought preparedness projects do not include California water emergency response actions, such as trucking of water or lowering well intakes."

The Water Conservation Bill of 2009 (SB7X-7) requires water suppliers to assess current demands and supplies over a 20-year planning horizon and consider various drought scenarios in Urban Water Management Plans (UWMP). The UWMP Act also requires water shortage contingency planning and drought response actions be included in a UWMP every five years. Urban water suppliers covered by the Act are those with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year. 2010 UWMPs were due to DWR by August 1, 2011.

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Action # Action Name Action Description	Type Other Responsible Organizations
4.2.6 Integrated Water Management *Establish a regulatory framework that encourages efficient and integrated management of water resources at local, regional, and statewide levels, with a focus on specific actions.*	3-Recommended Actions Governor and Legislature, State Water Board, DWR

Progress: 3 **Enacting Legislation:** Water Code Section 85021

Status Description:

Water Code Section 85021 states that "The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts."

Integrated Water Management for California is coordinated through the State Water Plan and through Integrated Regional Water Management Plans (IRWMPs) implemented by 48 regional water management groups. DWR is preparing Update 2013 for the Water Plan, which includes three initiatives: increase commitment to Integrated Water Management; strengthen agency alignment; and invest in innovation and infrastructure. The Update also includes references to and coordination with 23 related plans and programs, such as the State Wildlife Plan, the CPUC Water Action Plan. FloodSafe Strategic Plan, the Delta Vision Strategic Plan, and Delta Plan.

DWR supports Integrated Regional Water Management (IRWM) planning through guidance, grants, and technical assistance funded from Propositions 50, 84, and 1E. IRWM is implemented across the state through an incentive approach supported by grants to regions implementing IRWM Plans. The 48 regional water management groups cover 87% of the land area of California and 99% of the population. DWR is preparing a strategic plan for the IRWM program. Http://www.water.ca.gov/irwm/stratplan/

DWR awarded $9 million for additional IRWM planning grants in November 2012. Local Groundwater Assistance Grants will be awarded in summer 2013 ($4.7 million). Round 2 Stormwater Flood Management Grants will be awarded in July 2013 ($92 million). Round 2 Implementation Grants will be awarded in September 2013 ($131 million).

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
5.1.3	**Storage and Conveyance Construction**	3-Recommended Actions
Complete substantial development and construction of new surface and groundwater storage and associated conveyance facilities by 2020, with the goal of completing all planned facilities by 2030.		Resources, DWR, Reclamation

Progress: 1 **Enacting Legislation:**

Status Description:

Construction to expand Los Vaqueros Reservoir from 100,000 acre-feet to 160,000 acre-feet was initiated in April 2011. CCWD celebrated the completion of the dam construction and reopening of the north side of the watershed to the public in July 2012. Fishing facilities at the south side of the Los Vaqueros Reservoir reopened to the public in October 2012. The project cost $120 million. As of October 2012 the reservoir had filled to 100,000 acre-feet, the capacity of the original reservoir. The additional water storage will help ensure high-quality water deliveries to customers, reliability during drought, and protections for Delta fisheries and the environment.

Construction of other storage projects is pending completion of feasibility studies, environmental documentation, and permitting, which are underway. DWR estimates that storage studies would continue through 2015. If a new water bond is passed, the feasibility studies would be presented to the California Water Commission for potential funding in 2016.

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Action # Action Name Action Description	Type Other Responsible Organizations
5.2.1 Reservoir Operations *Change the operating rules of existing reservoirs to incorporate and reflect modern forecasting capabilities.*	3-Recommended Actions DWR, Reclamation, Army Corps

Progress: 2 **Enacting Legislation:** Water Code Section 85309

Status Description:

The 2009 water legislation (SBX7-1) directs DWR, in consultation with USACE and the CVFPB, to prepare a proposal to coordinate flood and water supply operations of the SWP and the CVP, and submit the proposal to the DSC for consideration for incorporation into the Delta Plan. In drafting the proposal, DWR must consider all related actions set forth in the Delta Vision Strategic Plan.

As directed by SBX2-1, DWR, in coordination with others, developed the Plan of Study for a System Reoperation Study in June 2011. The study is identifying and evaluating options for the reoperation of the State's flood protection and water supply systems to improve system efficiency while achieving multiple objectives of improved water supply reliability, flood risk reduction, and ecosystem restoration. As part of Phase 2 of the study, the team is formulating reoperation strategies around the following most promising concepts:

1. Reopera Θon of Shasta Reservoir in conjunc Θon with north and/or south of Delta groundwater storage.
2. Reopera Θon of Oroville Reservoir in conjunc Θon with north and/or south of Delta groundwater storage.
3. Integrated SWP and CVP opera Θo.
4. Reopera Θon of New Exchequer (Lake McClure) in conjunc Θon with di ferΘent conjunc Θve managementop Θons.

DWR is vetting reoperating ideas with local surface and groundwater storage owners to assess their interest in study of potential reoperation of their facilities with DWR. DWR expects to complete Phase 2 in summer 2013 and begin initial analysis of the most promising strategies. Those strategies that meet the three program objectives will be carried forward for more detail analysis. The schedule for completing the detailed analysis and releasing the report is the summer of 2014.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

5.2.2 San Joaquin Flood Bypass — 3-Recommended Actions

Require the Department of Water Resources to immediately create a flood bypass along the lower San Joaquin River. — Governor and Legislature, Resources, DWR, CVFPB

Progress: 2 **Enacting Legislation:** Water Code Section 9613(c)

Status Description:

As part of the Central Valley Flood Protection Act of 2008, the Legislature directed DWR and the Central Valley Flood Protection Board (CVFPB) to "investigate and evaluate the feasibility of potential bypasses or floodways that would significantly reduce flood stage in the San Joaquin River Watershed, upstream and south of Paradise Cut."

In June 2012, the CVFPB approved the Central Valley Flood Protection Plan (CVFPP), which identifies flood conveyance capacity expansion options in the north Delta and South Delta. The Plan provides an overall framework for flood management. DWR is now conducting regional studies, which will examine flood bypass opportunities on the San Joaquin River. On May 1, 2013, DWR issued letters of commitment to fund six regional flood management studies, including three on the San Joaquin River. When the regional plans are completed, DWR will incorporate feasible components of the regional plans in the 2017 CVFPP Update that are consistent with the State Systemwide Investment Approach as defined in 2012 CVFPP.

Paradise Cut Flood Bypass Expansion Project. The South Delta Water Agency is working with DWR and local landowners to expand the Paradise Cut Bypass to route flood flows away from urban areas in Lathrop and Stockton along the San Joaquin River and allow for a greater amount of flow to enter the Cut during high flow times. The project includes necessary dredging and levee work downstream of the Cut to safely pass the additional flow into the deeper Delta channels at acceptable or no additional risk to lands of that area. The project will include overflow and tidal habitat where feasible in coordination with fishery agencies.

See also Action 3.2.3, Flood Conveyance Capacity Expansion.

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Action # Action Name Action Description	Type Other Responsible Organizations
6.2.4 Delta Land Use Consortium *Immediately form a landowner consortium to create a new land use strategy that fosters recreation, increases habitat, reverses subsidence, sequesters carbon, improves handling of dredged material, and continues appropriate agriculture on Sherman, Twitchell, and Jersey Islands.*	3-Recommended Actions DWR, Local Agencies

Progress: 2 **Enacting Legislation:**

Status Description:

DWR is working with local Reclamation Districts on Sherman, Twitchell, and Jersey islands to implement several projects in habitat enhancement, subsidence reversal, carbon sequestration, and dredged material reuse. DWR is using these projects to develop project protocols for carbon credits that comply with California's cap-and-trade program.

To date, results show that rice farming can increase soil levels approximately 2" per year. Several hundred acres are managed to reverse subsidence and sequester carbon. There are approximately 12,000 acres available on Sherman and Twitchell islands.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

6.3.4 Levee Subventions Program — 3-Recommended Actions

Continue the existing Department of Water Resources levee subventions program until the comprehensive levee plan is completed. — DWR, CVFPB

Progress: 3 **Enacting Legislation:** Water Code Sections 12980 through 12995

Status Description:

Subventions. The Delta Levees Maintenance Subventions Program is a cost share program that provides technical and financial assistance to local levee maintaining agencies in the Delta for the maintenance and rehabilitation of nonproject and eligible project levees. The Subventions Program is authorized by California Water Code Sections 12980 through 12995 and is managed by DWR. The CVFPB reviews and approves DWR's recommendations and enters into agreements with local agencies to reimburse eligible costs of levee maintenance and rehabilitation. As currently authorized, the Subventions program provides up to 75% of eligible project costs from Propositions 84 and 1E. Since 2006, the State has invested approximately $67 million in Delta levee maintenance.

Special Projects. The Delta Levees Special Flood Control Projects provides financial assistance to local levee maintaining agencies for rehabilitation of levees in the Delta. The California Legislature under SB 34, SB 1065, and AB 360 established the program. Since the inception of the program, more than $100 million have been provided to local agencies in the Delta for flood control and related habitat projects. The intent of Legislature, as stated in the Water Code, is to preserve the Delta as much as it exists at the present time. The program presently focuses on flood control projects and related habitat projects for eight western Delta Islands--Bethel, Bradford, Holland, Hotchkiss, Jersey, Sherman, Twitchell and Webb Islands--and for the Towns of Thornton and Walnut Grove.

Five-Year Plans. DWR provides funding to encourage each local agency in the Delta to assess the current conditions of its levees and develop a strategic Five-Year Plan for rehabilitation of its facilities to a desired level of protection. Five-Year Plans will be required for all Special Projects applicants under the future Program Guidelines. The State will fund 100% of the first $50,000 spent on the preparation of Five-Year Plan, 75% of any costs between $50,000 and $100,000 and will not share any costs related to the Five-Year Plan beyond $100,000. The Five-Year Plan must provide an assessment of the district's existing levee system, a strategic plan to meet a desired level of protection, identification of risks to island assets, a long-term funding strategy, habitat mitigation and/or enhancement plans, and a CEQA and permit compliance plan.

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Action # Action Name Action Description	Type Other Responsible Organizations
NTA04 Middle River Two Barrier Project *Conduct a Middle River Corridor Two Barrier pilot project.*	1-Near-Term Actions DWR, CDFW, Central Valley Regional Board, SLC, Reclamation

Progress: 2 **Enacting Legislation:** Water Code Sections 85085 and 85350

Status Description:

The 2009 water legislation (SBX7-1) directed CDFW to coordinate with the State Water Board, the regional water quality control boards, and the SLC and their efforts to cooperate with Reclamation to construct and implement the Two-Gates Fish Protection Demonstration Project by December 1, 2010. The legislation appropriated $28M to DWR for the project.

Work on the Two Barrier Project has been suspended due to high cost and concerns that it would not achieve the desired benefits and could have significant impacts on listed fish by increasing predator habitat and adversely affecting critical habitat. IEP is conducting turbidity studies associated with early winter outflow to assess Delta smelt movement. A report on initial field investigations is in preparation. Additional field work is planned. These studies are not assessing the effectiveness of flow control structures since none are in place or planned to be constructed.

NTA06 Three Mile Slough Barrier *Evaluate the effectiveness of a Three Mile Slough Barrier project.*	1-Near-Term Actions DWR, Reclamation, CDFW

Progress: 2 **Enacting Legislation:** Water Code Section 85085(b)

Status Description:

The 2009 water legislation (SBX7-1) directed CDFW to evaluate the effectiveness of the Three Mile Slough Barrier project. This project is an alternative being evaluated as part of the Franks Tract Project. In February 2009, Reclamation published the "Initial Alternatives Investigation Report" on potential improvements in the North and Central Delta. The report recommends further investigation of the Three Mile Slough Barrier and the West False River Barrier. The Draft EIR on the projects was planned for Spring 2011, with a Record of Decision in Spring 2012, and construction beginning in Summer 2012. The project has been delayed by difficulties in developing agreement between DWR and Reclamation on modeling baselines, lack of federal budget for Reclamation participation and review, and redirection of staff to work on OCAP biological opinions. The date for the Draft EIS/EIR has been revised to April 2013 although federal funding to meet that date is uncertain.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

NTA07 Clifton Court Fish Screen Demonstration | 1-Near-Term Actions

Construct a demonstration fish protection screen at Clifton Court Forebay. | DWR, CDFW

Progress: 2 **Enacting Legislation:**

Status Description:

In July of 2010, MWD of So Cal, CCWD, SCVWD, ACWD, and Zone 7 initiated a feasibility-level study of low-flow fish screens at Clifton Court Forebay, building upon DWR's December, 2009 Low-flow Intake Technical Analysis Report. The final report is expected soon. Preliminary results indicate that there may be both fish and water supply benefits from installing fish screens at Clifton Court that would operate only during low flow diversion periods (typically in the winter).

NTA09 Emergency Response Materials | 1-Near-Term Actions

Stockpile rock and other emergency response materials. | DWR

Progress: 4 **Enacting Legislation:** Water Code Section 83002.7

Status Description:

DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. To date, DWR has stockpiled 485,000 sandbags, 9.5-miles of plastic, 2,800-rolls of twine, 72,000 stakes, 250,000 buttons, 12 roll-off containers, 225,000-tons of rock.

DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Land leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Emergency Management Agency

6.1.1 Delta Emergency Response Plan | 2-Legal and Procedural Milestones

Complete a Delta-wide regional emergency response plan by 2010 that establishes legally binding regional coordination. | Cal EMA, DPC, DWR, and Local Governments

Progress: 3 **Enacting Legislation:** Water Code Section 12994.5 and Water Code Section 85305

Status Description:

Multi-Hazard Coordination Task Force. SB 27, the Sacramento – San Joaquin Delta Emergency Preparedness Act of 2008 (Water Code Section 12994.5), directed Cal-EMA to form the SB 27 Task Force, which includes DPC, DWR, and a representative of each of the five Delta counties, to prepare a Multi-Hazard Plan for the Delta. The "Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report (SB 27 Task Force Report)" was approved for release on May 9, 2012. Its scope includes all of the activities of Actions 6.1.1, 6.1.2, 6.1.3, 6.1.4, and 6.1.5. As required, the SB 27 Task Force Report covers the following three topics:

(1) Makes recommendations to the Cal EMA relating to the creation of an interagency unified command system organizational framework, in accordance with the guidelines of the National Incident Management System and the Standardized Emergency Management System.
(2) Coordinates the development of a draft emergency preparedness and response strategy for the Delta region, for submission to the Secretary of Cal EMA. Where possible, the strategy utilizes existing interagency plans and planning processes of the involved jurisdictions and agencies that are members of the DPC.
(3) Develops and conducts an all-hazard emergency response exercise in the Delta, designed to test regional coordination protocols already in place.

Per Section 12994.5(d), the SB 27 Task Force ceased to exist on the date that the report was submitted. The main elements of the SB27 Task Force Report were incorporated into the Delta Plan. As part of the Delta Plan, the DSC recommended formation of a regional emergency response organization for the Delta. The work of the task force has continued through quarterly meetings of the Delta Working Group, which includes federal, state, and county emergency managers, reclamation districts, DSC, DPC, and other emergency managers.

Catastrophic Flood Incident Plan. Cal-EMA and FEMA are leading the effort to develop the Northern California Catastrophic Flood Incident Plan, which will be completed in fall 2013.

Emergency Communications Planning. DPC received a $5 million DWR grant to plan and implement improved Delta emergency communications and coordination among the five counties, state, and federal response planners.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

6.1.2 Emergency Management Actions	2-Legal and Procedural Milestones
Immediately begin a comprehensive series of emergency management and preparation actions.	Cal EMA, DPC, DWR, and Local Governments

Progress: 3 **Enacting Legislation:** Water Code Sections 12994.5 and 85305

Status Description:

Delta Vision Strategic Plan Action 6.1.2 proscribes 14 recommended Delta emergency management activities to be undertaken by DWR, Cal EMA, the Delta counties' Flood Response Group, the Army Corps, DOD, FEMA, and the Coast Guard.

SB27 Task Force Report. The Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report (Task Force Report) was approved for release on May 9, 2012. Its scope includes all of the activities in Actions 6.1.1, 6.1.2, 6.1.3, 6.1.4, and 6.1.5.

Golden Guardian Emergency Exercises. One of the important activities recommended was to conduct an emergency exercise in the Delta. A Golden Guardian Statewide Exercise Series (GG11) was held May 17, 18, and 19, 2011. The exercise focused on California's strategy in preparing for, responding to, and recovering from a catastrophic flood in the Inland Delta Region. Detailed information is restricted to those with security clearances for the exercise. The Golden Guardian 2013 Exercise Series theme was a major earthquake in the San Francisco Bay Area.

Emergency Resources. DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. To date, DWR has stockpiled 485,000 sandbags, 9.5-miles of plastic, 2,800-rolls of twine, 72,000 stakes, 250,000 buttons, 12 roll-off containers, 225,000-tons of rock. DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Land leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

Catastrophic Flood Plan. Cal EMA and FEMA have initiated a Catastrophic Delta Flood Plan, which will be completed in fall 2013.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

NTA10 Emergency Response Capacity Improvement | 1-Near-Term Actions

Assess and improve state capacity to respond to catastrophic events in the Delta. | Cal EMA, DPC, BTH, CDFW, DWR

Progress: 2 **Enacting Legislation:** Water Code Section 85305(a)

Status Description:

The 2009 water legislation directed that the Delta Plan must attempt to reduce risks to people, property, and State interests and that the DSC may incorporate into the Delta Plan the emergency preparedness and response strategies for the Delta developed the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force (Task Force). The reports describe recommended actions to improve the State's capacity to respond to catastrophic events in the Delta. The recommendations have largely been incorporated into the Delta Plan

Emergency Resources. DWR continues to plan and implement efforts to increase emergency response material stockpiles, transfer stations, and contract resources for Delta emergencies. Delta stockpiles of sandbags, plastic, twine, stakes, roll-off containers, and rock have increased. DWR has completed the environmental review for construction of three transfer facilities at Rio Vista, Brannan Island, and the Port of Stockton. Leases or purchases are expected in 2013 with construction completed in 2014. DWR is also developing emergency contract agreements for construction services. Specifications will be complete in 2013 with contracts in place in 2014.

Catastrophic Flood Incident Plan. Cal-EMA and FEMA are leading the effort to develop the Northern California Catastrophic Flood Incident Plan, which will be completed in fall 2013.

Emergency Communications Planning. DPC received a $5 million DWR grant to plan and implement improved Delta emergency communications and coordination among the five counties, state and federal response planners.

See Actions 6.1.1, Delta Emergency Response Plan, and 6.1.2, Emergency Management Actions, for further information.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

Governor

1.1.2 Administrative Co-Equal Goals — 3-Recommended Actions

Incorporate the co-equal goals into the mandated duties and responsibilities of all state agencies with significant involvement in the Delta. — Governor and Legislature

Progress: 0 **Enacting Legislation:**

Status Description:

The Governor has not directly incorporated the co-equal goals into the mandated duties and responsibilities of relevant state agencies. In his January 12, 2012 State of the State speech, Governor Brown briefly included a commitment to the Two Co-Equal Goals, referring to the Bay-Delta Conservation Plan. "Another huge issue we must tackle is water.... We know more now and are committed to the dual goals of restoring the Delta ecosystem and ensuring a reliable water supply." Since that time, the Governor presented a modified proposed project for BDCP in July 2012, but has not provided further direction committing state agencies to the Two Co-Equal Goals.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Legislature

1.1.1 Statutory Co-equal Goals | 2-Legal and Procedural Milestones

Write the co-equal goals into the California Constitutionor into statute. | Governor and Legislature

Progress: 10 **Enacting Legislation:** Public Resources Code Section 29702, Water Code Sections 85054, 85020, 85021, 85022(c), and 85023

Status Description:

Enacting legislation complete. Accurately defines the Delta Vision Strategic Plan (DVSP) objectives including The Two Co-Equal Goals and policy objectives.

Federal law now incorporates the Two Co-Equal Goals. The Delta Plan notes that the federal Energy and Water Development Appropriations Act of 2012 (Title II of the Consolidated Appropriations Act of 2012 (PL 112-074)) contains, in pertinent part, the following: The Federal policy for addressing California's water supply and environmental issues related to the Bay-Delta shall be consistent with State law, including the coequal goals of providing a more reliable water supply for the State of California and protecting, restoring, and enhancing the Delta ecosystem…Nothing herein modifies existing requirements of Federal law. (Section 205)

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

1.1.3 Requiring Achievement of Co-Equal Goals	3-Recommended Actions
Require the achievement or advancement of the co-equal goals in all water, environmental, and other bonds, and operational agreements and water contracts or water rights permits that directly or indirectly fund activities in the Delta.	Governor and Legislature, Resources, CalEPA

Progress: 1 **Enacting Legislation:** Division 26.7, Section 79700

Status Description:

The Legislature and the Governor's Administration have not taken action, beyond the passage of the 2009 water legislation, to require achievement of the Two Co-Equal Goals in bonds, operational agreements, contracts, and water rights permits. The 2013 Delta Plan establishes a long-term vision that the Two Co-Equal Goals will be the foundation of all State water management policies and no water rights decisions or water contracts that impact the Delta shall be made without consideration of the coequal goals (Delta Plan page 22). The Plan directs the State Water Board to adopt and implement updated flow objectives for the Delta to achieve the Two Co-Equal Goals of ecosystem protection and a reliable water supply by June 2, 2014.

As a direct result, in December 2012, the State Water Board released its proposed update to the current Water Quality Control Plan for the San Francisco Bay-Sacramento-San Joaquin Delta Estuary (Update). The update identifies the beneficial uses of water in the Delta, water quality objectives to protect those uses, and a program of implementationto achieve those objectives. The Update is intended to implement the Two Co-Equal Goals of ecosystem protection and a reliable water supply.

The proposed water bond (SBX7-2) funds both ecosystem restoration and water supply reliability activities. The bond measure is scheduled for the November 2014 ballot.

The 2009 water legislation (SBX7-8) appropriated $546 million of previously approved bond funds for activities in or related to the Delta: $250M for integrated regional water management, $32M for flood control, $170M to reduce risk of levee failure that would jeopardize water conveyance, $70M for stormwater flood management projects, and $24M for grants to support natural community conservation plans.

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Action # Action Name Action Description	Type Other Responsible Organizations
2.4.1 Delta Investment Fund *Initiate the Delta Investment Fund with state funding.*	2-Legal and Procedural Milestones Governor and Legislature

Progress: 10 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The 2009 water legislation established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with DSC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000.

The Legislature has not provided any additional funds for Delta investment. In 2011 and 2012, the DPC and Delta Conservancy relied on funds from other sources to complete planning work. The DPC received funding from the Environmental License Plate Fund and the Harbors and Watercraft Fund. Additionally, funding strategies from various foundations was used for the following projects: NHA Phase II Feasibility Study, The Great California Delta Trail, and Delta Working Landscapes. The Delta Conservancy borrowed funds from the DSC to complete the strategic plan and received foundation grant funds to continue outreach and coordination.

2.4.2 Delta Investment Fund Structure *Structure the Delta Investment Fund so that it can accept revenues from federal, state, local, and private sources.*	2-Legal and Procedural Milestones Governor and Legislature

Progress: 10 **Enacting Legislation:** Public Resources Code Section 29778.5

Status Description:

The Legislature established the Delta Investment Fund, which may receive funds from federal, State, local, and private sources. The funds must be used in accord with DSC Economic Sustainability Plan. The Legislature provided an initial allocation of $250,000.

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Action # Action Name Action Description	Type Other Responsible Organizations
4.2.1 Water Recycling	3-Recommended Actions
Modify the Water Recycling Act of 1991 to add a statewide target to recycle on the order of 1.5 million acre-feet of water annually by 2020.	Governor and Legislature

Progress: 2 **Enacting Legislation:**

Status Description:

Water Recycling Act of 1991. This Act included Water Code §13577, which established a statewide goal to recycle a total of 700,000 acre-feet (AF) of water per year by the year 2000, and 1,000,000 acre-feet of water per year by the year 2010. According to the CA Water Plan 2013 Update, these goals were not met. Efforts to amend the recycling goals have not been successful. In 2009 AB 410 (De La Torre) would have modified and established recycling targets of 700,000 AF by 2000, 1,000,000 AF by 2010, 1,525,000 AF by 2020, and 2,525,000 AF by 2030. In 2011-2012, AB 2398 (Hueso) would have established a statewide goal of 1.5 million AF by 2020 and 2.5 million AF by 2030.

CA Water Plan. The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. California Water Plan Update 2013 will recommend revised goals for 2020 and 2030 in October 2013.

Recycled Water Policy. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted the following goals for California:

-Increase the use of recycled water over 2002 levels by at least one million acre feet per year (afy) by 2020 and by at least two million afy by 2030.
-Increase the use of stormwater over use in 2007 by at least 500,000 afy by 2020 and by at least one million afy by 2030.
-Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.

Included in these goals is the subs Θtu Θon of as much recycled water for potable water as possible by 2030.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

4.2.2 Desalination	3-Recommended Actions
Enact legislation now to encourage local water agencies to at least triple the current statewide capacity for generating new water supplies through ocean and brackish water desalination by 2020.	Governor and Legislature

Progress: 1 **Enacting Legislation:**

Status Description:

The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted goals for recycled water use and stormwater use, but not for desalination (see Action 4.2.1, Water Recycling)

The California Water Plan Update 2009 makes several recommendations to facilitate greater use of desalination in California. These include: ensuring adequate funding to develop emerging desalination technologies; providing technical assistance and funding to local agencies; providing guidance on permitting requirements; and ensuing adequate planning to make certain of a collaborative process. DWR's 2008 California Desalination Planning Handbook remains the seminal resource for desalination planning.
Http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v2c09_desalination_cwp2009.pdf

The 2009 Water Plan Update estimates the following capacities in California desalination by 2025:

26 plants with a capacity of 84,000 acre-feet per year (afy) in operation.
7 plants with a capacity of 81,000 afy in design or construction.
16 plants with a capacity of 314,000 afy planned or projected.

For a total of 49 plants with a capacity of 479,000 afy.

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Action # Action Name Action Description	Type Other Responsible Organizations
4.2.3 Urban Stormwater Goals *Request that the State Water Resources Control Board set goals by 2015 for infiltration and direct use of urban storm water runoff throughout the Delta watershed and its export areas.*	3-Recommended Actions Governor and Legislature, State Water Board

Progress: 2 **Enacting Legislation:**

Status Description:

Recycled Water Policy. The 2009 water legislation, SB7X-7, [Water Code §10608.50(b)] directed DWR, in consultation with the State Water Board, to propose new statewide targets for regional water resources management practices as part of the State Water Plan, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff no later than January 1, 2011. The State Water Board adopted its Recycled Water Policy on February 3, 2009, under Resolution No. 2009-0011. The Board adopted the following goals for California:

-Increase the use of recycled water over 2002 levels by at least one million acre feet per year (afy) by 2020 and by at least two million afy by 2030.
-Increase the use of stormwater over use in 2007 by at least 500,000 afy by 2020 and by at least one million afy by 2030.
-Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.

Low-impact Development. In 2009, the Legislature passed SB 790 (Pavley), which authorized grants for projects designed to implement or promote low-impact development for new or existing developments that will contribute to the improvement of water quality or reduce storm water runoff and for projects designed to implement specified storm water resource plans. The bill authorized a city, county, or special district to develop, jointly or individually, storm water resource plans. The bill also authorized a regional water management group to coordinate its planning activities to address or incorporate into its plan any storm water resource planning that is undertaken pursuant to the bill's provisions.

Stormwater Permits. The State Water Board and Regional Boards issue permits to medium and large metropolitan areas (Phase 1, 100,000 people and larger), smaller communities (Phase 2, less than 100,000 people, industrial facilities, and Caltrans facilities. These permits require stormwater management plans, primarily to address water quality issues. Management measures also include storage and retention of stormwater.

On March 16, 2011 the State Water Board's "Status of Water Boards' Strategic Priority Actions" list identified the following actions among their highest priority for timely completion and committed to direct the resources needed to ensure completion of these priorities by the end of 2012.

Statewide Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit. The MS4 General Permit, which currently covers more than 250 entities in California, expired in May 2008. State Water Board staff is developing a second five-year term period.

Stormwater Industrial General Permit Reissuance. The statewide General Permit for Discharges of Stormwater Associated with Industrial Activities (commonly referred to as the Industrial General Permit), was last reissued in 1997. It is due to be reissued using the approach and principles (including numeric limits) adopted in the 2009 General Construction Permit.

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Actions Status by Lead Agency

Action #	Action Name	Type
Action Description		Other Responsible Organizations

SWB Action Item 5 is the Caltrans MS4 Permit. Stormwater discharges from the Caltrans Municipal Separate Storm Sewer system (MS4) are regulated under an individual NPDES permit.

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Action # Action Name Action Description	Type Other Responsible Organizations
5.1.2 Storage and Conveyance Recommendations *Direct the Department of Water Resources, the Department of Fish and Game, and other allied agencies to recommend the size and location of new storage and conveyance facilities by the end of 2010. Develop a long-term action plan to guide design, construction, and operation, and present the recommendation and plan to the California Delta Stewardship Council for a consistency determination.*	2-Legal and Procedural Milestones Governor and Legislature, Resources, DWR, CDFW, Reclamation, Others

Progress: 0 **Enacting Legislation:**

Status Description:

BDCP and Storage. The 2009 water legislation (SBX7-1) specified the evaluation and compliance requirements for conveyance alternatives in the BDCP process. The legislation provides general statements regarding the importance of storage for improving water supply reliability, but with no additional direction to DWR. The March 2013 BDCP EIR/EIS Administrative Draft, Appendix 1B "Water Storage", provides an overview of the potential for additional water storage, including groundwater storage, large system storage (i.e. CALFED storage), and regional/local storage. The BDCP also asserts that water storage was neither a legally required component of the BDCP nor a project that must be addressed in the cumulative impact analyses for the EIR/EIS for the BDCP.

CALFED Storage Investigations. The CALFED Record of Decision (2000) identified five potential surface storage reservoirs that resulted from screening of 52 potential new or expanded reservoirs. In November 2010, DWR published a progress report on the CALFED storage investigations. That report notes that the four storage projects discussed could produce a long-term average increase in annual yield of approximately 800,000 acre-feet. The planning schedule included in the report estimated that storage studies would continue through 2013, with Federal and State decisions occurring in 2014. The Final Staff Draft Delta Plan recommended that DWR complete the storage investigations for proposed offstream storage facilities by December 31, 2012.

At the California Water Commission's meeting on March 20, 2013, DWR presented its Status Update on CALFED Surface Storage Investigations as follows:

North-of Delta Offstream Storage (Sites): Draft Feasibility Study (FS) – Summer 2013; Draft EIS/EIR – Fall 2013, Final FS and EIS/EIR – Fall 2015.

Shasta Lake Enlargement: Draft FS – February 2012 (Released); Draft EIS – June 2013; Final FS and EIS – Fall 2015

Los Vaqueros Expansion: Draft FS – Fall 2014; Draft EIS/EIR – Fall 2014; Final FS and EIS/EIR – Fall 2016.

Temperance Flat: Draft FS – Fall 2013; Draft EIS/EIR – Spring 2014; Final FS and EIS/EIR – Fall 2015.

2014 Water Bond. The proposed water bond (SBX7-2) would provide funding for the public benefits associated with storage projects. The water bond has been postponed until the November 4, 2014 ballot, as a legislatively-referred bond act. At its March 29, 2013 meeting, the Association of California Water Agencies' (ACWA) Board of Directors identified guidelines for modifying the 2014 water bond to protect key priority areas (including water storage) and aid

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its passage next year.

Tulare Lake Basin Storage. The CDFW Central Region participated in the development of "Tulare Basin Conservation Plan Water Supply Strategies Report" by the Tulare Basin Wildlife Partners in 2010. This was intended to be a comprehensive report on the potential for use of wetlands and river corridors in the Tulare Lake Basin for temporary surface storage and groundwater storage/recharge. Funding for storage investigations from Proposition 50 has ended.

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Action # Action Name Action Description	Type Other Responsible Organizations
5.2.3 Infiltration Planning in Watersheds *Request that the Department of Water Resources encourage greater infiltration as part of watershed management planning.*	3-Recommended Actions Governor and Legislature, Resources, DWR

Progress: 2 **Enacting Legislation:**

Status Description:

There was no direction given by the Legislature in the 2009 water legislation specifically addressing watershed management planning and increased infiltration.

Water Plan Update 2013. DWR's "California Water Plan Update 2013, Chapter 27, Watershed Management," (Administrative Draft of September 2012) includes the following Strategic Practices Recommendations:

"11. Increase precipitation infiltration into the soil to reduce surface runoff to a level that is typical of natural runoff retention patterns; this goal is often achieved by reducing impervious surfaces within a watershed. Retain intact floodplain and other wetlands to the extent possible, to maintain or increase residence time of water in the watershed."

"16. Design drainage and storm water runoff controls to maximize infiltration into local aquifers, and minimize immediate downstream discharges during runoff."

"21. Protect soil resources and restore the functions of drastically disturbed soils, to slow run off and increase rainfall infiltration."

http://www.waterplan.water.ca.gov/cwpu2013/ac-draft/index.cfm

Water Plan 2009. DWR's "California Water Plan Update 2009" contained the policy strategy of requiring local agencies to develop water budgets that quantify the amount of water flowing into and out of the basin. Enhanced infiltration and groundwater flow are an important part of the inflow calculation for the watershed. Increased groundwater storage and conjunctive use of groundwater and surface water are specific strategies recommended for the Delta region.

IRWM Grant Guidelines. In November 2012, DWR and Resources released the final version of the "Integrated Regional Water Management (IRWM) Grant Program Guidelines Under Propositions 84 and 1E." The guidelines note that as per Water Code Section 10544, grant preference will be given to proposals that address statewide priorities including techniques that store and infiltrate runoff while protecting groundwater.
Http://www.water.ca.gov/irwm/grants/docs/Guidelines/GL_2012_FINAL.pdf

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

7.1.1 Delta Stewardship Council — 2-Legal and Procedural Milestones

Establish a California Delta Stewardship Council to replace the Bay-Delta Authority and take over CALFED programs. — Governor and Legislature

Progress: 10 **Enacting Legislation:** Water Code Sections 85034(c) and 85280(c)

Status Description:

The 2009 water legislation established the DSC as an independent State agency with a proposed 2011-2012 budget of $43,972,000. The fundamental purpose of the DSC's "legally enforceable management plan" is to achieve the Two Co-Equal Goals and to "...develop, adopt and commence implementation of the Delta Plan by January 1, 2012." The DSC has been duly established as an independent State agency (Delta Plan Chapter 2, Table 2-1). The DSC assumed the duties and responsibility of the previous CALFED Bay-Delta Authority, as mandated by the 2009 water legislation.

The Delta Plan (Appendix C: "Administrative Performance Measures") proposes the establishment of the "Delta Plan Interagency Implementation Committee" (DPIIC), with completion of a report on performance measures due by December 31, 2014. The DPIIC will be comprised of the representatives of the federal, state, and local agencies with management or regulatory authority over the lands, waters, and resources of the Delta ecosystem. This committee will meet at least twice annually to fulfill the legislature's directive that "each agency shall coordinate its actions pursuant to the Delta Plan with the Council and other relevant agencies" (Water Code Section 85204). At the November 15, 2012 DSC meeting, DSC staff submitted an initial recommendation as to the formation of the Interagency Implementation Committee, including its proposed mission, membership, and organization. DSC expects to initiate the committee in Fall 2013.

7.1.2 Delta Conservancy — 2-Legal and Procedural Milestones

Establish a California Delta Conservancy as early as possible in the 2009 legislative session. — Governor and Legislature

Progress: 10 **Enacting Legislation:** Public Resources Code Sections 32320 and 32322

Status Description:

The 2009 water legislation established the Conservancy to act as a primary State agency to implement ecosystem restoration in the Delta. The Conservancy selected their Executive Officer, Campbell Ingram, in March 2011. The 2012 Delta Conservancy Strategic Plan was adopted in March 2012.

All DVSP recommendations have been met, except that members elect the Chair. The Chair is not appointed by the Governor as recommended.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

7.1.3 Delta Protection Commission | 2-Legal and Procedural Milestones

Strengthen the Delta Protection Commission through legislation. | Governor and Legislature

Progress: 10 **Enacting Legislation:** Public Resources Code Sections 29735

Status Description:

The Legislature made the following changes to the DPC governance and authority:
- Directed the DPC to prepare and submit to the Legislature recommendations regarding the potential expansion of, or change to, the Primary Zone or the Delta.
- Tasked the DPC with issuing recommendations to the Stewardship Council on "methods of preserving the Delta."
- Reduced the terms of office of DPC members from 4 years to 2 years.
- Reduced DPC size from 23 members to 15 members.
- Instructed the DPC to develop an economic sustainability plan for the Delta.
- Gave the DPC authority to facilitate implementation of joint habitat restoration and enhancement plans.

The DVSP recommended that the Legislature require the DPC to modify all of its plans and policies, including its Resource Management Plan to be consistent with the Delta Plan. Further, the DVSP recommended that the DPC authority be modified to review and certify all local city and county general plans for consistency with the DPC Resource Management Plan and the Delta Plan. The Legislature did not make these changes to the role and authority of the DPC.

7.1.4 Delta Science and Engineering Program | 3-Recommended Actions

Require the California Delta Stewardship Council to create a Delta Science and Engineering Program and a Delta Science and Engineering Board by September 1, 2009. | Governor and Legislature

Progress: 10 **Enacting Legislation:** Water Resources Code Section 85280

Status Description:

The 2009 water legislation (SBX7-1) established the Delta Independent Science Board (ISB), whose members are to be appointed by the DSC. The DSC appointed ten Delta ISB members on May 27, 2010 for five-year terms. The DSC developed and approved a "Charge to the Delta ISB" on August 26, 2010. In 2012, the DSC added engineering expertise to the ISB when filling a vacancy. The Delta ISB replaces the previous CALFED Independent Science Board. The ISB has been reviewing and commenting on the drafts of the Delta Plan and other Delta planning processes.

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Action # Action Name Action Description	Type Other Responsible Organizations
7.3.1 Financing Principles *Enact a series of principles regarding design of financing into legislation authorizing the Delta Stewardship Council.*	3-Recommended Actions Governor and Legislature

Progress: 0 **Enacting Legislation:** Water Resources Code Section 85350

Status Description:

The 2009 water legislation (SBX7-1) authorizing the DSC did not include financing principles. The proposed 2012 water bond, (SBX7-2), includes provisions authorizing the California Water Commission to develop guidelines for determining the public benefits that would be eligible for the funds dedicated to water storage projects.

Chapter 8 of the Delta Plan proposes to develop a funding and finance plan after completing the Delta Plan. The chapter suggests five funding principles, discusses potential user fees, identifies five near-term funding needs, but does not provide any estimated costs. Appendix O provides general information with respect to financing.

The BDCP will include a chapter on funding the conservation measures included in the proposed plan, including facilities construction, operations and maintenance and ecosystem restoration. These actions are projected to cost $20 to $23 billion over 50 years.

7.3.2 Delta Governance Funding *Establish a base of revenues outside the state General Fund for the work of the California Delta Stewardship Council, the Delta Conservancy, the Delta Protection Commission, and related core activities of the Department of Fish and Game, the Department of Water Resources, and the State Water Resources Control Board.*	3-Recommended Actions Governor and Legislature, DSC

Progress: 0 **Enacting Legislation:**

Status Description:

Other than the Water Bond (SBX7-2), no apparent direction has been provided on financing the work of the DSC, DC, DPC, and other agencies. Chapter 8 of the Delta Plan proposes to develop a funding and finance plan after completing the Delta Plan. The chapter suggests five funding principles, discusses potential user fees, identifies five near-term funding needs, including some of the agency science and oversight, but provides limited information on estimated costs. Appendix O provides general information with respect to financing.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

7.3.3 New Funding Sources	3-Recommended Actions
Find new revenue sources beyond the traditional bond funds or public allocations.	Governor and Legislature, DSC, Others?

Progress: 0 **Enacting Legislation:**

Status Description:

The legislature has not identified new sources of funds beyond bond funds or general fund allocations.

Water Bond. Several placeholder bills have been proposed during the 2013-2014 session for discussion of the forthcoming water bond (scheduled for the November 2014 ballot). For example, SB 42 (Wolk) would replace the current bond proposal ($11.1 billion) with a water bond of an unspecified amount. AB 295 (Salas) would replace the current proposed bond with a $3 billion bond for water projects.

Prior Bills. Several bills have previously been proposed in the Legislature to provide long-term funding for ecosystem and water supply reliability projects in the Delta and/or statewide. Other bills would establish principles or an outline of a finance plan. For example Senator Wolk introduced legislation (SB571) in the 2011-2012 session that would direct the California Water Commission to develop a financing plan for water projects across the state and review and approve funding allocations, similar to the California Transportation Commission. None of these bills has passed.

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Action # Action Name Action Description	Type Other Responsible Organizations

Natural Resources Agency

2.1.2 Delta Recreation Area *Expand by 2010 the State Recreation Area network in the Delta, combining existing and newly designated areas.*	3-Recommended Actions Resources, CDPR

Progress: 3 **Enacting Legislation:** Water Code Section 85301(c)(1)

Status Description:

The 2009 water legislation directed CDPR to prepare and submit to the DPC a proposal for expanding the Delta network of State recreation areas, combining existing and newly designated areas, and including any plans or concepts included in the Central Valley Vision Implementation Plan (CVVIP), a "catalog of potential initiatives," for Central Valley parks and recreation including the Delta. In April 2011, CDPR published its "Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh" (Recreation Proposal). It contains all the CVVIP plans and concepts as well as many other specific actions to expand the Delta network of recreational areas. The recommendations were incorporated into the DPC Economic Sustainability Plan and the Delta Plan. The Delta Plan includes seven recommendations regarding recreation in the Delta, including a recommendation to the CDPR to expand the recreation area in the Delta as funds become available. Other recommendations include direction to the DPC, the Delta Conservancy, CDFW, Boating and Waterways, cities, counties, water management agencies, and ecosystem restoration agencies to expand access, investment, opportunities, and cooperation.

State budget constraints have resulted in closure or hours curtailment for state parks in the Delta.

The National Association of Recreation Resource Planners (NARRP) presented its 2012 Excellence in Planning Award to CDPR for its Recreation Proposal.

The Recreation Proposal can be found at http://www.parks.ca.gov/pages/795/files/delta%20rec%20proposal_08_02_11.pdf

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

5.1.1	**Dual Conveyance Feasibility**	2-Legal and Procedural Milestones
Direct the Department of Water Resources and other allied agencies to further investigate the feasibility of a dual conveyance facility, building upon the Bay-Delta Conservation Plan effort.		Governor and Legislature, Resources, DWR

Progress: 2 **Enacting Legislation:** Water Code Sections 85020(f), 85304, and 85320(b)(2)(B)

Status Description:

TThe 2009 water legislation directed that the BDCP review and analyze a "reasonable range of Delta conveyance alternatives," including "through-Delta, dual conveyance, and isolated conveyance alternatives and including further capacity and design options of a lined canal, an unlined canal, and pipelines." The legislation further directs that the Delta Plan promote options for new and improved infrastructure relating to water conveyance in the Delta, storage systems, and the operation of both to achieve the Two Co-Equal Goals.

The Delta Plan recommends completion of the BDCP by December 31, 2014 as an important part of improving water management for California and restoring the Delta ecosystem. It further recommends action by DWR and other agencies to complete current water storage investigations and identify smaller, near-term actions and projects to improve the operation of existing Delta conveyance facilities, transfers, storage, and other water system benefits.

In March and May 2013, Resources posted the administrative draft chapters of the Bay-Delta Conservation Plan. On May 10, 2013, the 20,000-page consultant draft EIR/EIS was posted at www.baydeltaconservationplan.com. It describes the potential effects of the BDCP and alternative ways to address water supply reliability and ecosystem restoration in the Sacramento-San Joaquin Delta. The document considers potential effects on water supplies, air quality, agriculture, recreation, transportation, land use, and other aspects of the human and natural environments.

Federal, state and local agencies are reviewing the document in preparation for an Oct. 1 release of the public review draft of the EIR/EIS, which also will mark the beginning of the period for formal public comment. At that time workshops, hearings, and in-Delta office hours will be conducted to help people access EIR/EIS information, ask questions, and make comments

Chapter 3.4 of the plan describes Conservation Measure 1 (CM1), which includes construction and operation of a north of Delta diversion up to 9,000 cubic feet per second (cfs) to be operated in conjunction with and preferentially to south Delta diversion facilities, except at times necessary to meet fish conservation goals. Chapter 5 is the Effects Analysis of the proposed conservation measures, including CM1. Chapter 9 describes several dual conveyance alternatives with varying diversion and conveyance capacity from the Sacramento River to the south Delta pumping plants (3,000 to 15,000 cfs).

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Action # Action Name | Type
Action Description | Other Responsible Organizations

Office of Planning and Research

2.3.2 Delta Enterprise Zones | 3-Recommended Actions

Establish special enterprise zones at the major "gateways" to the Delta as part of the economic development plan. | OPR, Local Governments, Legislature and Governor

Progress: 3 **Enacting Legislation:**

Status Description:

The Delta Plan notes that DPC and California State Parks foresee opportunities to improve and increase recreation and tourism in the Delta. Both agencies recommend improvements of "gateways" to the region on the Delta's urban edges, and "base camps" inside the Delta at destinations such as resorts, Legacy Communities, or parks that are focal points for visitors.

Enterprise zones were initially targeted for elimination in the 2011-12 state budget, but all 42 existing zones survived the cuts. The Brown administration asked for a change in the rules for claiming tax credits; companies would be limited to applying within one year of hiring an eligible employee, instead of the current four.

Much of the Delta is already in Enterprise Zones, with enterprise zones for San Joaquin County, Sacramento, and Pittsburg. The San Joaquin County Enterprise Zone is the largest in the state, covering Stockton, Lodi, Tracy, Lathrop, and Manteca. The zone encompasses approximately 656 square miles with over 55 square miles of commercial and industrial properties. More than 98% of existing commercial/industrial locations are in the zonal boundaries. The designation was due to expire in 2013 but was extended to 2023. More than 1,016 San Joaquin County businesses received approved Hiring Tax Credit Vouchers, with 11,090 new employees hired. (San Joaquin Partnership & Business Council, Inc. March 28, 2013.)

The new Sacramento Enterprise Zone received its final designation January 12, 2012, and has an expiration date of 2024. On April 10, 2012, Housing and Community Development issued a final Enterprise Zone designation to Pittsburg, adjacent to the Delta, with an expiration date of 2027.

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Action # Action Name Type

Action Description Other Responsible Organizations

State Water Board

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Action # Action Name Action Description	Type Other Responsible Organizations
3.2.2 Fish Migration Flows	2-Legal and Procedural Milestones
Provide adequate flows at the right times to support fish migrations, and reduce conflicts between conveyance and migration, by 2012.	State Water Board, DWR, Reclamation

Progress: 2 **Enacting Legislation:** Water Code Sections 85084.5 and 85086

Status Description:

Flow Criteria Report. The 2009 water legislation directed the State Water Board to develop new Delta flow criteria by August 2010 as necessary to protect public trust resources. The new criteria are intended to inform planning decisions for the Delta Plan and the Bay-Delta Conservation Plan. In 2010, the State Water Board prepared a report titled "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem" (Flow Criteria Report). The "Flow Criteria Report" included a prioritized schedule and estimate of costs to complete in-stream flow studies for the Delta and for high priority rivers and streams in the Delta watershed and Sacramento River watershed by 2018.

Instream Flow Studies. The 2009 water legislation also directed the State Water Board to complete instream flow studies for two other categories of rivers and streams, by two specific deadlines:
1) High priority rivers and streams in the Delta watershed that were not covered in the "Flow Criteria Report" by 2012; and
2) All major rivers and streams outside the Sacramento River watershed by 2018.

As a result of this legislative objective, the State Water Board released its "Instream Flow Studies for the Protection of Public Trust Resources: A Prioritized Schedule and Estimate of Costs (December 2010)".

CDFW's Quantifiable Biological Objectives and Flow Criteria. The 2009 water legislation (SBX7-1) also directed CDFW, in consultation with USFWS and NMFS, to develop and recommend to the State Water Board Delta flow criteria and quantifiable biological objectives for aquatic and terrestrial species of concern dependent on the Delta by November 2010. In response, CDFW completed its report "Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta" (CDFW QBO Report) on December 3, 2010.

All three reports were submitted to, and subsequently approved by, the Delta Stewardship Council by December 2010, thereby meeting the statutory deadlines.

Bay-Delta Plan Update. In 2006 the State Water Board adopted the "San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan" (the Bay-Delta Plan). The State Water Board initiated its "Bay-Delta Plan Update" in 2012. The "Flow Criteria Report," "Instream Flow Studies," and "CDFW QBO Report" will inform this four-phase update, which shall include proposed increases in flows that are tributary to the Sacramento-San Joaquin Delta (Delta) and improve water quality in the southern Delta.

Phase 1, initiated in 2012, will update flow objectives to protect fish and wildlife in the San Joaquin River and its salmon-bearing tributaries, and update salinity objectives to protect agriculture in the southern Delta. The State Water Board expects to make a decision on Phase 1 in August 2013.

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Action # Action Name | Type

Action Description | Other Responsible Organizations

Phase 2 will address the remainder of the Bay-Delta Plan, including Delta outflow and export objectives, and other measures needed to protect Delta fish migration. Phase 2 will focus on the following issues: (1) Delta outflow objectives, (2) export/inflow objectives, (3) Delta Cross Channel Gate closure objectives, (4) Suisun Marsh objectives; (5) potential new reverse flow objectives for Old and Middle Rivers; (6) potential new floodplain habitat flow objectives; (7) potential changes to the monitoring and special studies program, and (8) other potential changes to the program of implementation. The State board expects to make a decision regarding Phase 2 in 2014.

See also Action 3.4.1, for further information on Instream Flows.

3.4.2 Wet Period Diversions | 2-Legal and Procedural Milestones

Develop and adopt management policies supporting increased diversion during wet periods, a joint effort of the State Water Resources Control Board, the Department of Fish and Game, the Department of Water Resources, and related federal agencies, by 2012. | State Water Board, CDFW, DWR, Fed. Agencies

Progress: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

Flow Criteria Report. The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. Accordingly, in 2010, the State Water Board prepared a report titled "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (Flow Criteria Report)." The report was a joint effort of the State Water Board, the Department of Fish and Game, the Department of Water Resources, and related federal agencies. The Flow Criteria Report was submitted to, and subsequently approved by, the Delta Stewardship Council, also in 2010.

The "Flow Criteria Report," describes the flows that would be needed in the Delta ecosystem if fishery protection were the sole purpose for which its waters were put to beneficial use. In keeping with the narrow focus of the legislation, this report only presents a technical assessment of flow and operational requirements to provide fishery protection under existing conditions. It includes the 3.4.2 recommendations on increased diversion during wet periods, the 3.4.3 recommendation on increased spring outflow and the 3.4.4 recommendation on fall outflow variability.

The "Flow Criteria Report" does not consider or balance competing uses for water such as hydropower, recreational, municipal and industrial, and agricultural supply. Restoration and protection of the Delta ecosystem will also depend on many factors, including actions to improve habitat, reduce salmon predation, minimize entrainment of fish at pumping facilities, prevent pollution, and increase river flows. These competing uses of water are other factors are being considered in the State Water Board's current planning efforts in the "Bay-Delta Plan Update." As part of the Update team, CDFW is providing scientific and technical input for constraints on exports when water flows are low and when CDFW believes there will be harm to fisheries and listed species.

Please refer to Action 3.2.2 for more information on the update process.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
3.4.3	**Delta Outflow**	2-Legal and Procedural Milestones
Adopt new State Water Resources Control Board requirements by 2012 to increase spring Delta outflow. Commence implementation no later than 2015.		State Water Board

Progress: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Actions 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for priority tributaries to the Delta. The update will be completed in four phases. Phase 2 will include updates of increased Delta spring outflow objectives. The State Water Board expects to establish the new Delta flow objectives in 2014 and commence implementation thereafter.

More information is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml

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Action # Action Name Action Description	Type Other Responsible Organizations
3.4.4 Fall Delta Outflow	3-Recommended Actions
Adopt new State Water Resources Control Board requirements by 2012 to reintroduce fall outflow variability no later than 2015.	State Water Board

Progress: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Actions 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for priority tributaries to the Delta. The update will be completed in four phases. Phase 2 will include review of Delta fall outflow variability standards.

More information is available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/comp_review.shtml

Fall Low Salinity Habitat (FLaSH). On July 9, 2012 the U.S. Department of the Interior and the U.S. Geological Survey in conjunction with the Bureau of Reclamation and Interagency Ecological Program (IEP) released a draft of the Synthesis of Studies in the Fall Low Salinity Zone of the San Francisco Estuary with respect to Fall Low Salinity Habitat (FLaSH). On September 12, 2012 an Independent Science Review Panel released its Study Synthesis – Year One of the Delta Fall Outflow Adaptive Management Plan. It contains a review of the draft FLaSH report and the draft 2012 Fall Outflow Adaptive Management Plan. The FLaSH studies investigated the health of delta smelt related to the position of Fall Low Salinity Habitat.

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
3.4.5	**San Joaquin River Flow Objectives**	2-Legal and Procedural Milestones
Increase San Joaquin River flows between February and June by revising the State Water Resources Control Board's Vernalis flow objectives and the state and federal water projects' export criteria. Revise the flow objectives and criteria no later than 2012.		State Water Board

Progress: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. Please see Actions 3.2.2 and 3.4.2 for additional information.

Bay-Delta Plan. As described more fully in Action 3.2.2, the State Water Board is developing and implementing updates to the "San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan" (the Bay-Delta Plan) including flow objectives for San Joaquin River. Proposed changes to the "Bay-Delta Plan" include revised February through June Lower San Joaquin River (LSJR) flow objective applicable to the salmon bearing tributaries to the LSJR (the LSJR, Merced, Tuolumne, and Stanislaus rivers) and an associated program of implementation to support and maintain the natural production of viable native LSJR watershed fish populations migrating through the Delta; and revised numeric southern Delta salinity objectives and an associated program of implementation to protect agricultural beneficial uses in the southern Delta.

Report on Scientific Basis. The "Technical Report On The Scientific Basis For Alternative San Joaquin River Flow And Southern Delta Salinity Objectives" was released by the State Water Board in February 2012 and updated in December 2012. The report includes the 3.4.5 recommendations on increased spring flows. The finding of the report will inform the updates to the Bay-Delta Plan.

Draft SED. As mentioned in Action 3.2.2, on December 31, 2012, the State Water Board released for public review and comment, a draft Substitute Environmental Document (SED) for the updates to the Bay-Delta Plan. The SED supports potential changes to San Joaquin River flow and southern Delta water quality objectives and a program of implementation to be included in the Bay-Delta Plan. The proposal is intended to balance water needs for fishery protection with diversions and exports for municipal supply, agriculture, and hydropower uses as per the recommendations of Action 3.4.5.

From Bay Delta Planning Efforts Fact Sheet 0404113.docx. More information is available at:
http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_qu ality_control_planning/2012_sed/

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Action #	Action Name	Type
Action Description		Other Responsible Organizations
3.4.6	**San Joaquin Fall Pulse Flows**	3-Recommended Actions
Provide short-duration San Joaquin River pulse flows in the fall starting by 2015.		State Water Board

Progress: 2 **Enacting Legislation:** Water Code Section 85086(c)(1)

Status Description:

The 2009 water legislation (SBX7-1) directed the State Water Board to prepare a report on Delta flow criteria. The State Water Board completed the report in August 2010.

As described more fully in Action 3.4.2 and 3.4.5, the State Water Board is developing and implementing updates to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan) including flow objectives for the San Joaquin River. However, this update to the Bay-Delta Plan does not include changes to the current requirements and operations for fall San Joaquin River pulse flows.

Additional information is available at:
http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/index.shtml

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

4.2.4 Diversion Data Collection	3-Recommended Actions
Request agencies to ensure that accurate and timely information is collected and reported on all surface water and groundwater diversions in California by 2012.	Governor and Legislature, State Water Board, DWR

Progress: 4 **Enacting Legislation:** Water Code Section 5101 and 5107

Status Description:

Water Rights Reporting. The 2009 water legislation included water rights enforcement provisions (SBX7-8), which modified the reporting requirements for surface water diversions, eliminated many exemptions, and added civil and criminal penalties, which had been previously lacking. As the result of this legislation, most diverters in the Delta were required to report diversions for the first time. The law requires any diverter who diverts water after December 31, 1965 to report by July 1 their diversions from the previous year. There are some limited exceptions. Diverters are required to monitor their diversions on a monthly basis starting January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriated $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. The State Water Board has established an online water rights reporting system (see Action 7.1.5).

Groundwater Monitoring and Reporting. The 2009 water legislation also included requirements for DWR to establish a groundwater elevation monitoring and reporting program by January 1, 2012 (SB7X-6). DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. As of January 1, 2013, 63 organizations have been designated groundwater monitoring entities. These entities are reporting on 146 groundwater basins or sub-basins. DWR's role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a public database, which is now available online at http://www.water.ca.gov/groundwater/casgem/online_system.cfm.

Delta Watermaster. On July 7, 2010, the State Water Board appointed Craig M. Wilson as California's first Delta Watermaster for a four-year term. The Delta Watermaster is empowered to take enforcement against unlawful diversions in the Delta and to submit reports on specified water issues. The Delta Watermaster works with Delta diverters to increase compliance with new reporting requirements. As of April 2013, 359 of the 360 (99%) of the diverters required to report have filed the required reports on diversion. Statements of monthly diversion and use for 2012 are due for the first time by July 1, 2013.

Unified Reporting. DWR is developing a unified water use reporting form and database, which is expected to be in place in mid-2014.

See also Action 7.1.5, Water Diversion Compliance and Near-term Action NTA01, Water Diversion Information.

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Action # Action Name Action Description	Type Other Responsible Organizations
7.1.5 Water Diversion Compliance	3-Recommended Actions
Improve the compliance of diversions water use with all applicable laws.	State Water Board, DWR

Progress: 4 **Enacting Legislation:** Water Code Sections 85086, 85230, and 5100

Status Description:

The 2009 water legislation included water rights enforcement (SBX7-8), which modified the reporting requirements for surface water diversions and added civil and criminal penalties, which had been previously lacking. The law requires any diverter who diverts water after December 31, 1965 to report each July 1 their diversions from the previous year. There are some limited exceptions. Diverters must monitor their diversions on a monthly basis effective January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriates $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. As the result of this legislation, most diverters in the Delta were added to this reporting program for the first time.

The California Code of Regulations (CCR) Title 23, Chapter 2.7, Sections 907 to 930 identifies requirements for the mandatory electronicfiling of reports on the State Water Board's internet website. Reports subject to mandatory electronic filing include: supplemental statements of water diversion and use, Water Right Progress Reports by Permittees, Reports of Licensees, Notices of Groundwater Extraction and Diversion, and reports filed by watermasters.

The State Water Board maintains a computer database and online information system for water rights reporting, the Electronic Water Rights Information Management System (eWRIMS). eWRIMS contains information on water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors. The eWRIMS Report Management System provides water right holders the ability to report monthly diversion and use electronically. eWRIMS consists of both a tabular database and an integrated geographic information system (GIS). Users can search and display eWRIMS data by several criteria, including the water right owner's name, watershed, stream system, and county.

Since 2009, the State Water Board hired 20 new staff to perform water right enforcement and public trust protection activities. These resources have been focused on investigations in the North Coast Instream Flow Policy Area to address illegal reservoir diversions and in the Delta counties to achieve compliance with the self-monitoring and measurement requirements of the legislation.

These actions by the Legislature and State Water Board make significant steps to address the DVSP recommendations regarding reporting, penalties, and additional staffing. The DVSP also noted that “the information about current diversions and use in the current water system is inadequate to the task of managing the co-equal values.” The DVSP recommended development of a more robust monitoring and management system for stream flows, surface water diversions, and groundwater pumping by the State Water Board, DWR, and others. This system envisions real-time information management and decisionmaking to “provide a better foundation for changes in water diversion timing,” as well as efforts to improve regional self-sufficiency. Additional information is needed to understand the progress of these recommended improvements.

On September 19, 2012 Delta Watermaster, Craig Wilson, issued “Improving Water Right Enforcement Authority.” The report argues that the State Water Board’s weak enforcement authority for water rights is inconsistent with its broad enforcement authority over water quality matters. The Watermaster

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Action #	Action Name	Type
Action Description		Other Responsible Organizations

recommends that additional water right administrative and enforcement authority be provided to the State Water Board. The current process for enforcing the constitutional prohibition against the waste or unreasonable use of water is unnecessarily convoluted. He recommends that administrative civil liabilities be added for, among other things, violations of diversion reporting and monitoring requirements.

See also Action 4.2.4, Diversion Data Collection, and Near-term Action NTA01, Water Diversion Information.

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Action # Action Name | Type
Action Description | Other Responsible Organizations

NTA01 Water Diversion Information | 1-Near-Term Actions

Obtain needed information on water diversion and use. | State Water Board, DWR

Progress: 4 **Enacting Legislation:** Water Code Sections 85086(a), 85230, and 5100

Status Description:

Water Rights Reporting.
The 2009 water legislation included water rights enforcement provisions (SBX7-8), which modified the reporting requirements for surface water diversions, eliminated many exemptions, and added civil and criminal penalties, which had been previously lacking. As the result of this legislation, most diverters in the Delta were required to report diversions for the first time. The law requires any diverter who diverts water after December 31, 1965 to report by July 1 their diversions from the previous year. There are some limited exceptions. Diverters are required to monitor their diversions on a monthly basis starting January 1, 2012. The penalty for willful misstatements is $1,000 and/or 6 months in jail. The State Water Board may impose penalties of $1,000 and $500 per day for failure to submit reports. The legislation also continuously appropriated $3.75M annually from the Water Rights Fund for 25 enforcement personnel at the State Water Board. The State Water Board has established an online water rights reporting system (see Action 7.1.5).

Electronic Reporting.
The California Code of Regulations (CCR) Title 23, Chapter 2.7, Sections 907 to 930 identifies requirements for the mandatory electronicfiling of reports on the State Water Board's internet website. Reports subject to mandatory electronic filing include: supplemental statements of water diversion and use, Water Right Progress Reports by Permittees, Reports of Licensees, Notices of Groundwater Extraction and Diversion, and reports filed by watermasters.

The State Water Board maintains a computer database and online information system for water rights reporting, the Electronic Water Rights Information Management System (eWRIMS). eWRIMS contains information on water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors. The eWRIMS Report Management System provides water right holders the ability to report monthly diversion and use electronically. eWRIMS consists of both a tabular database and an integrated geographic information system (GIS). Users can search and display eWRIMS data by several criteria, including the water right owner's name, watershed, stream system, and county. DWR is developing a uniform water use reporting form and database as part of the Water Use Efficiency program. The system is expected to be in place in mid-2014.

Enforcement.
Since 2009, the State Water Board hired 20 new staff to perform water right enforcement and public trust protection activities. These resources have been focused on investigations in the North Coast Instream Flow Policy Area to address illegal reservoir diversions and in the Delta counties to achieve compliance with the self-monitoring and measurement requirements of the legislation.

Delta Watermaster.
On July 7, 2010, the State Water Board appointed Craig M. Wilson as California's first Delta Watermaster for a four-year term. The Delta Watermaster is empowered to take enforcement against unlawful diversions in the Delta and to submit reports on specified water issues. The Delta Watermaster works with Delta diverters to increase compliance with new reporting requirements. As of April 2013, 359 of the 360 (99%) of the diverters required to report have

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filed the required reports on diversion. Statements of monthly diversion and use for 2012 are due for the first time by July 1, 2013.

On September 19, 2012 Delta Watermaster, Craig Wilson, issued "Improving Water Right Enforcement Authority." The report argues that the State Water Board's weak enforcement authority for water rights is inconsistent with its broad enforcement authority over water quality matters. The Watermaster recommends that additional water right administrative and enforcement authority be provided to the State Water Board. The current process for enforcing the constitutional prohibition against the waste or unreasonable use of water is unnecessarily convoluted. He recommends that administrative civil liabilities be added for, among other things, violations of diversion reporting and monitoring requirements.

Groundwater Monitoring and Reporting.
The 2009 water legislation also included requirements for DWR to establish a groundwater elevation monitoring and reporting program by January 1, 2012 (SB7X-6). DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. As of January 1, 2013, 63 organizations have been designated groundwater monitoring entities. These entities are reporting on 146 groundwater basins or sub-basins. DWR's role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a public database, which is now available online at http://www.water.ca.gov/groundwater/casgem/online_system.cfm.

These actions by the Legislature and State Water Board make significant steps to address the DVSP recommendations regarding reporting, penalties, and additional staffing. The DVSP also noted that "the information about current diversions and use in the current water system is inadequate to the task of managing the co-equal values." The DVSP recommended development of a more robust monitoring and management system for stream flows, surface water diversions, and groundwater pumping by the State Water Board, DWR, and others. This system envisions real-time information management and decisionmaking to "provide a better foundation for changes in water diversion timing," as well as efforts to improve regional self-sufficiency. Additional information is needed to understand the progress of these recommended improvements.

See also Action 4.2.4, Diversion Data Collection, and Action 7.1.5, Water Diversion Compliance.

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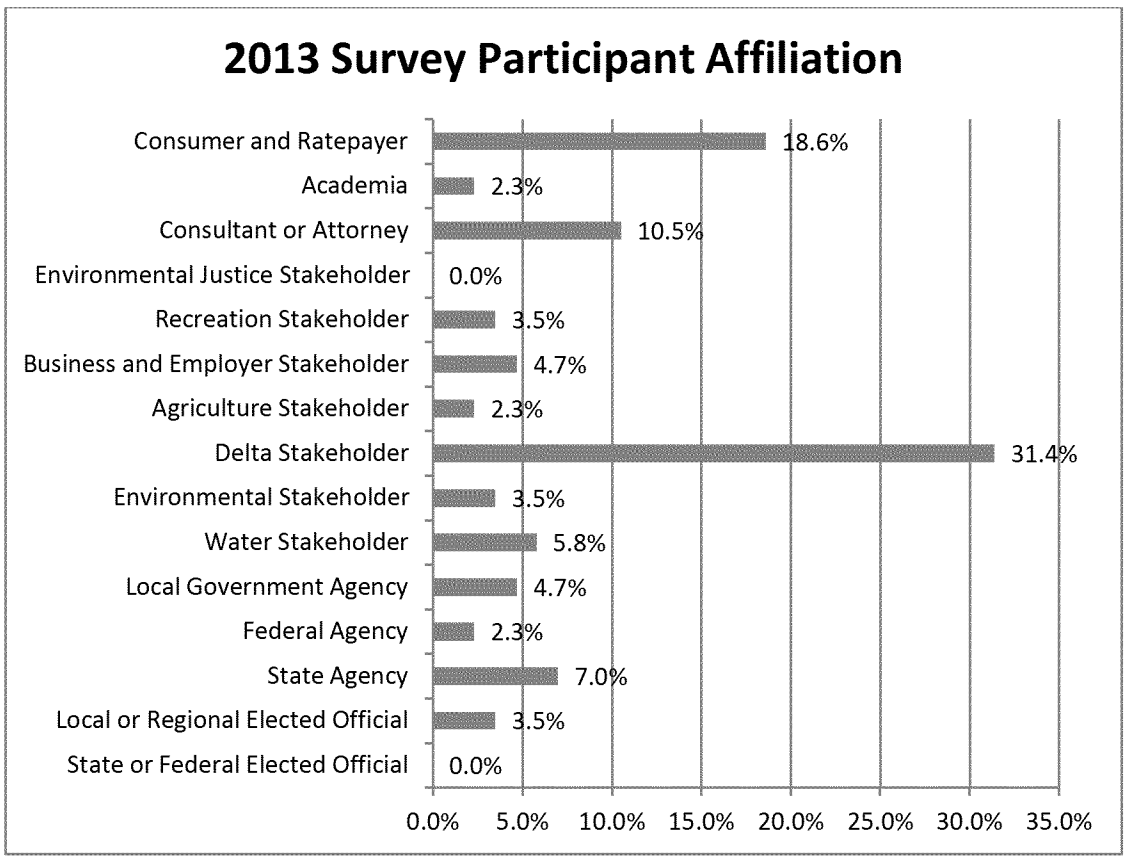
Appendix D
Online Survey – Quantitative Results

This appendix provides the online survey questions and quantitative results. The open-ended questions and responses are included in Appendix E.

The online survey was available from May 6 through June 7, 2013. The survey was announced by email to approximately 1,150 contacts on the Delta Vision Foundation contact list. DVF staff distributed email announcements on May 6, May 20, and June 4 encouraging participation in the survey. The survey was also posted on the DVF website.

One hundred and thirty-five people provided input through the online survey, with 86 participants providing their name and affiliation category. The following graphic depicts the affiliations for participants who completed the survey.



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Delta Vision Foundation 2013

SurveyMonkey

1. Please assess the current level of risk for achieving the Two Co-Equal Goals:(1) Delta ecosystem restoration; and (2) water supply reliability. To what degree are we currently at risk of failure?

	Extreme	Critical	Very High	High	Moderate	Low	Rating Average	Rating Count
Delta Ecosystem Restoration	**45.2% (61)**	23.7% (32)	12.6% (17)	6.7% (9)	8.1% (11)	3.7% (5)	4.80	135
Water Supply Reliability	**27.5% (36)**	17.6% (23)	16.8% (22)	14.5% (19)	13.7% (18)	9.9% (13)	4.01	131
							answered question	**135**
							skipped question	**0**

2. To what degree are efforts to address the Delta moving in the right direction to achieve the Two Co-Equal Goals?

	Best Direction		Waiting to See		Worst Direction	Rating Average	Rating Count
Delta Ecosystem Restoration	4.5% (6)	13.5% (18)	19.5% (26)	11.3% (15)	**51.1% (68)**	2.09	133
Water Supply Reliability	6.9% (9)	14.5% (19)	20.6% (27)	16.0% (21)	**42.0% (55)**	2.28	131
						answered question	**135**
						skipped question	**0**

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3. Please provide additional information or comments about the progress in reducing the risks to the Delta ecosystem and water supply reliability.

	Response Count
	89
answered question	89
skipped question	46

4. Please rate the progress on actions to implement the Delta Vision Strategic Plan in each of the four evaluation topics.

	Effective Progress: On Track	Moderate Progress	Some Progress: Needs More	Inadequate Progress	Needs Substantial Improvement	Rating Average	Rating Count
Governance	3.4% (4)	12.7% (15)	22.0% (26)	21.2% (25)	**40.7% (48)**	2.17	118
Ecosystem Restoration and Recovery	1.7% (2)	9.4% (11)	17.9% (21)	23.9% (28)	**47.0% (55)**	1.95	117
Water Supply Reliability	3.5% (4)	9.6% (11)	18.4% (21)	27.2% (31)	**41.2% (47)**	2.07	114
Delta Vitality and Security	1.7% (2)	7.7% (9)	17.1% (20)	17.9% (21)	**55.6% (65)**	1.82	117
answered question							118
skipped question							17

5. Please provide additional information and comments about actions that have made progress and are on track.

	Response Count
	48
answered question	48
skipped question	87

6. Please provide additional information and comments about actions that are not making progress and are falling behind.

	Response Count
	51
answered question	51
skipped question	84

7. For each of the following state leadership, agencies, and organizations, please assess the leadership and effectiveness they are demonstrating in implementing the Delta Vision Strategic Plan and subsequent legislation to achieve the Two Co-Equal Goals.

	Strong Leadership: Highly Effective		Moderate Effectiveness		Needs Substantial Improvement	Rating Average	Rating Count
Governor's Administration	6.7% (7)	7.7% (8)	15.4% (16)	8.7% (9)	**61.5% (64)**	1.89	104
Legislature	1.0% (1)	5.0% (5)	20.8% (21)	27.7% (28)	**45.5% (46)**	1.88	101
Delta Stewardship Council	4.0% (4)	12.0% (12)	26.0% (26)	17.0% (17)	**41.0% (41)**	2.21	100
Delta Science Program and Independent Science Board	5.0% (5)	24.0% (24)	**30.0% (30)**	17.0% (17)	24.0% (24)	2.69	100
Natural Resources Agency	6.0% (6)	9.0% (9)	17.0% (17)	29.0% (29)	**39.0% (39)**	2.14	100
Department of Water Resources	6.9% (7)	8.8% (9)	12.7% (13)	25.5% (26)	**46.1% (47)**	2.05	102
Department of Fish and Game	3.0% (3)	5.9% (6)	28.7% (29)	**33.7% (34)**	28.7% (29)	2.21	101
California Water Commission	0.0% (0)	5.3% (5)	25.3% (24)	18.9% (18)	**50.5% (48)**	1.85	95
Sacramento-San Joaquin Delta Conservancy	1.1% (1)	10.6% (10)	**35.1% (33)**	23.4% (22)	29.8% (28)	2.30	94
Delta Protection Commission	8.3% (8)	10.4% (10)	**31.3% (30)**	20.8% (20)	29.2% (28)	2.48	96
State Water Resources Control Board	5.0% (5)	7.0% (7)	23.0% (23)	20.0% (20)	**45.0% (45)**	2.07	100
Central Valley Regional Water Quality Control Board	5.3% (5)	7.4% (7)	14.9% (14)	28.7% (27)	**43.6% (41)**	2.02	94

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California Emergency Management Agency	1.2% (1)	2.3% (2)	31.4% (27)	20.9% (18)	**44.2% (38)**	1.95	86
Central Valley Flood Protection Board	3.4% (3)	6.7% (6)	31.5% (28)	20.2% (18)	**38.2% (34)**	2.17	89
Department of Food and Agriculture	1.2% (1)	2.4% (2)	27.1% (23)	29.4% (25)	**40.0% (34)**	1.95	85
Department of Transportation	0.0% (0)	3.8% (3)	21.3% (17)	32.5% (26)	**42.5% (34)**	1.86	80
Other (specify below)	11.1% (2)	5.6% (1)	11.1% (2)	5.6% (1)	**66.7% (12)**	1.89	18
						Other (please specify)	10
						answered question	**104**
						skipped question	**31**

8. Please provide additional information or examples of effective agency or organization leadership, management, planning, and implementation related to the Delta Vision Strategic Plan.

		Response Count
		40
	answered question	**40**
	skipped question	**95**

9. Please provide additional information about how specific state agencies or organizations need to improve related to the Delta Vision Strategic Plan.

	Response Count
	41
answered question	41
skipped question	94

10. Please assess the participation and cooperation of federal agencies in implementing the Delta Vision Strategic Plan and working towards achieving the Two Co-Equal Goals.

	Highly Cooperative: Effective Participation		Moderately Cooperative		Needs Substantial Improvement	Rating Average	Rating Count
U.S. Department of the Interior	2.2% (2)	12.4% (11)	20.2% (18)	19.1% (17)	**46.1% (41)**	2.06	89
U.S. Fish & Wildlife Service	2.2% (2)	14.4% (13)	22.2% (20)	24.4% (22)	**36.7% (33)**	2.21	90
U.S. Bureau of Reclamation	3.3% (3)	11.1% (10)	22.2% (20)	20.0% (18)	**43.3% (39)**	2.11	90
U.S. Geological Survey	2.4% (2)	17.1% (14)	**32.9% (27)**	15.9% (13)	31.7% (26)	2.43	82
U.S. Army Corps of Engineers	0.0% (0)	9.1% (8)	19.3% (17)	**36.4% (32)**	35.2% (31)	2.02	88
U.S. Department of Commerce	0.0% (0)	3.9% (3)	18.2% (14)	35.1% (27)	**42.9% (33)**	1.83	77
National Marine Fisheries Service	2.3% (2)	18.2% (16)	27.3% (24)	21.6% (19)	**30.7% (27)**	2.40	88
U.S. Environmental Protection Agency	2.3% (2)	9.1% (8)	27.3% (24)	27.3% (24)	**34.1% (30)**	2.18	88
U.S. Department of Agriculture	1.3% (1)	2.6% (2)	23.4% (18)	29.9% (23)	**42.9% (33)**	1.90	77
Other (specify below)	0.0% (0)	0.0% (0)	28.6% (2)	0.0% (0)	**71.4% (5)**	1.57	7
					Other (please specify)		3
					answered question		**92**
					skipped question		**43**

11. Please provide additional information about federal agency participation and cooperation related to the Delta Vision Strategic Plan and work to achieve the Two Co-Equal Goals.

	Response Count
	32
answered question	32
skipped question	103

12. To what degree are the following stakeholder groups contributing to the advancement of the Two Co-Equal Goals?

	Highly Constructive: Supportive		Moderately Constructive		Needs Substantial Improvement	Rating Average	Rating Count
Urban Water Districts and Agencies	7.8% (7)	10.0% (9)	26.7% (24)	17.8% (16)	**37.8% (34)**	2.32	90
Agricultural Water Districts and Agencies	8.8% (8)	6.6% (6)	16.5% (15)	19.8% (18)	**48.4% (44)**	2.08	91
Delta Counties and Communities	18.7% (17)	19.8% (18)	19.8% (18)	**23.1% (21)**	18.7% (17)	2.97	91
Area of Origin Counties and Communities	17.0% (15)	15.9% (14)	20.5% (18)	**33.0% (29)**	13.6% (12)	2.90	88
Farmers and Agricultural Organizations	7.8% (7)	8.9% (8)	24.4% (22)	**32.2% (29)**	26.7% (24)	2.39	90
Environmental and Wildlife Organizations	6.6% (6)	23.1% (21)	**28.6% (26)**	24.2% (22)	17.6% (16)	2.77	91
Business and Economic Development Organizations	3.5% (3)	4.7% (4)	30.2% (26)	25.6% (22)	**36.0% (31)**	2.14	86
Labor Organizations	1.2% (1)	3.6% (3)	20.5% (17)	24.1% (20)	**50.6% (42)**	1.81	83
Environmental Justice Organizations	3.7% (3)	8.5% (7)	23.2% (19)	28.0% (23)	**36.6% (30)**	2.15	82
Water Recreation Industry and Organizations	7.2% (6)	13.3% (11)	**30.1% (25)**	27.7% (23)	21.7% (18)	2.57	83
Other (specify below)	0.0% (0)	0.0% (0)	33.3% (1)	0.0% (0)	**66.7% (2)**	1.67	3
					Other (please specify)		0

answered question	93
skipped question	42

13. Please provide additional information about constructive stakeholder participation related to the Delta Vision Strategic Plan and subsequent implementing legislation.

Response Count
33

answered question	33
skipped question	102

14. What do you see as the major barriers and constraints in efforts to achieve the Two Co-Equal Goals?

Response Count
87

answered question	87
skipped question	48

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15. What recommendations do you have for improving the State's progress and action on the Two Co-Equal Goals?

	Response Count
	77
answered question	77
skipped question	58

16. Please tell us about yourself for our evaluation (names and contact information will be kept confidential).

	Response Percent	Response Count
Name:	100.0%	86
Organization:	100.0%	86
ZIP Code:	100.0%	86
Email Address:	100.0%	86
answered question		86
skipped question		49

17. Select the item that best represents your affiliation.

	Response Percent	Response Count
State or Federal Elected Official	0.0%	0
Local or Regional Elected Official	3.5%	3
State Agency	7.0%	6
Federal Agency	2.3%	2
Local Government Agency	4.7%	4
Water Stakeholder	5.8%	5
Environmental Stakeholder	3.5%	3
Delta Stakeholder	**31.4%**	**27**
Agriculture Stakeholder	2.3%	2
Business and Employer Stakeholder	4.7%	4
Recreation Stakeholder	3.5%	3
Environmental Justice Stakeholder	0.0%	0
Consultant or Attorney	10.5%	9
Academia	2.3%	2
Consumer and Ratepayer	18.6%	16
	answered question	**86**

skipped question	**49**

18. Select the item that best represents your management level.

	Response Percent	Response Count
Elected	7.0%	6
Executive	18.6%	16
Management	8.1%	7
Program or Project Management	5.8%	5
Program or Project Staff	12.8%	11
Individual Consumer and Ratepayer	19.8%	17
Interested Californian	**27.9%**	**24**
	answered question	**86**
	skipped question	**49**

19. Would you like the DVF staff to contact you to hear more about your perspectives?

	Response Percent	Response Count
Yes, send me an email to set up an appointment.	35.0%	28
No thanks, my survey responses say it all.	**65.0%**	**52**
answered question		**80**
skipped question		**55**

Appendix E
Online Survey – Open-Ended Question Responses

Survey Overview

This appendix provides the online survey open-ended questions and responses. The quantitative questions and responses are included in Appendix D.

The online survey was available from May 6 through June 7, 2013. The survey was announced by email to approximately 1,150 contacts on the Delta Vision Foundation contact list. DVF staff distributed email announcements on May 6, May 20, and June 4 encouraging participation in the survey. The survey was also posted on the DVF website.

One hundred and thirty-five people provided input through the online survey, with 86 participants providing their name and affiliation category.

Open-ended Questions

The following are the open-ended questions included in the online survey (the other questions are quantitative questions shown in Appendix D):

3. Please provide additional information or comments about the progress in reducing the risks to the Delta ecosystem and water supply reliability.

5. Please provide additional information and comments about actions that have made progress and are on track.

6. Please provide additional information and comments about actions that are not making progress and are falling behind.

8. Please provide additional information or examples of effective agency or organization leadership, management, planning, and implementation related to the Delta Vision Strategic Plan.

9. Please provide additional information about how specific state agencies or organizations need to improve related to the Delta Vision Strategic Plan.

11. Please provide additional information about federal agency participation and cooperation related to the Delta Vision Strategic Plan and work to achieve the two co-equal goals.

13. Please provide additional information about constructive stakeholder participation related to the Delta Vision Strategic Plan and subsequent implementing legislation.

14. What do you see as the major barriers and constraints in efforts to achieve the Two Co-Equal Goals?

15. What recommendations do you have for improving the State's progress and action on the Two Co-equal Goals?

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Questions and Responses

The responses have been edited for grammar and clarity.

Two Co-Equal Goals

Please provide additional information or comments about the progress in reducing the risks to the Delta ecosystem and water supply reliability.

1. We should not redirect any more water. The new water project proposed by the governor will cause problems. It will divert water from the Delta which will be the death blow to the fishery. It will create a water barrier during flood times which will reduce the delta ability to cleanse itself v
2. The process is driven to destroy the delta in pursuit of the coequal goals, completely ignoring the limiting mandate of protecting the delta as an evolving place. This evolution is forced to accommodate the coequal goals, not a natural agriculture, social and community evolutionary change. It is simply a taking to preserve a failed water delivery system.
3. The current BDCP plan is completely insane and very political. It claims it has local input, but ignores Delta farmers and all government entities from the West Delta to Stockton and Sacramento.
4. Ecosystem Restoration Program has abundant research indicating higher water flow levels are critical for any potential improvement of bay-delta health. Well over a decade of scientific research is available as well as restoration projects that collectively are working to improve the health of the bay delta.
5. I think we need to let the water flow through the delta and out to the ocean the way it is meant to. Reducing the flows endangers our habitat and decreases the quality of our water. Desalination plants would help meet both goals by letting the water flow and taking the salt water and desalinating it to produce drinkable water. A Solar Desalination plant would be the most beneficial. However that is another topic all together. The main point is we need to focus on restoring the Delta and providing a source of reliable water.
6. This is the state's biggest boondoggle ever--it will ruin the Delta. The Big Shots want to send water to Los Angeles to fuel more urban development and the water contractors want to use the tunnels for transferring Sacramento River water south. The Delta Vision foundation just tried to convince people that what's wrong is really right. I think you all have your heads in the sand--or else you're taking money under the table or in job security, position, or SOMETHING, otherwise your sense of ethics would be affronted!
7. Include more Delta landowners, business owners and other real interests in the legal Delta...not paid stakeholders.
8. The BDCP schedule seems to be constantly delayed
9. Diverting the Sacramento River around the Delta will make the water supply less reliable and Destroy the Delta ecosystem.
10. Selected interests have focused on a single solution, contrary to a more holistic approach to identify the most viable and cost-effective solution. Tunnel vision will likely lead to a failed opportunity to solve a persistent challenge. Moreover, a 'broken hub wheels no water'.
11. The lack of trust between water exporters, delta interests, environmentalists and now some Congressional Members causes me great concern.
12. The Delta needs more water than mandated in the plan.

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13. The current BDCP preferred alternative (Alt. 4 Scenario H1) makes Fall X2 worse rather than improving Fall X2 (which the fishery agencies, who will approve the BDCP, want)! Without new storage to create new water, BDCP can only offer to balance the co-equal goals rather than meeting them both. The Delta Stewardship Council recently adopted a Delta Plan that has no action to improve Delta water quality, despite being required to do so by the 2009 Delta Reform Act. $250 million has been spent planning and analyzing the BDCP and there is no viable proposal. Time for a change in leadership and direction. New storage and ability to capture water during wet periods (and reduce diversions during dry periods) is the simple solution that Governor Brown and the exporters pretend not to see. Their arrogance means a lost opportunity to actually restore the Delta and enhance California's water supply.
14. Too many people (mostly located within the Delta) never accepted the concept of co-equal goals, so have no interest in achieving the balanced programs necessary to achieve them and are intent on stopping any program or project that doesn't meet their narrow self-interest.
15. The biggest threat seems to be the Federal Agencies lack of decision making in moving forward along with their reluctance to make controversial decisions.
16. Early restoration projects seem slow to start/get permits Some progress on regional water supply projects/conservation BDCP - big wait-and-see, but progress on conveyance seems way ahead of restoration/other stressors
17. Still aren't able to make an informed business decision based on cost, supply and reliability for the water supply portion of the BDCP
18. Water Supply Reliability is too simplistic a term to be useful in this context. There is currently excellent water supply reliability for a very low amount of water. When water users promote reliability they mean that they want to remove more water more reliably (i.e. all the time) from the system. Even very junior water rights holders that do not have reliable water as defined in their contracts since their contracts are only intended to be fulfilled in wet years will clamor for more reliable water. If they achieve more reliable water the ecosystem will be bankrupt. These two goals are in direct conflict with each other. At this time water supply reliability is being achieved to the detriment of the ecosystem.
19. The risk of catastrophic failure of many delta levees in enormous; they are made of peat as I understand. A good jiggle and they may inundate much land, putting the current pumping plants to Central Valley and SoCal at risk of "no water." Delta ecosystem has been severely hurt by the introduction of non-native Bass which may be prized for sport fishing, but annihilate the native species. Let fishermen help eliminate the striped bass population
20. Energy component not well addressed. Finance component not well addressed. The two are interlinked. Peak oil threatens viability of DV as well as current operations and maintenance. South state initiatives in supply/conservation need greater emphasis. Risks of continued investment of trust resources in irrigated agriculture on arid soils of south SJ valley not addressed. More emphasis statewide on small local water projects needed as political risk reduction for reduced Delta Ops. This will be important fall-back for delays/abandonment of tunnel construction as well. A ratio of area restored / area managed to mimic restored condition won't be quantifiable for some time, assuming restoration even begins. The economics and performance of the two approaches play into risk levels and assumptions about, reasonable use, co-equal goals and strategic investments.
21. First, the premise of two co-equal goals ignores the public safety issue, which is why Delta locals really are opposed to efforts to address the ecosystem restoration and water supply reliability. The focus takes away from the value of sustainable flood management activities. Second, ecosystem and water supply reliability (and public safety) objectives really are measured in different temporal and spatial scales ... under current CEQA/NEPA & ESA rulings, there is actually less risk associated with long-term ecosystem restoration. HOWEVER, ecosystem science has tended to be piece-meal and single objective & regulatory focused, thus

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it has avoided addressing value and sustainability. Water supply reliability is similarly plagued in lack of a public understanding of value to the state economy, in part due to the beneficiary pays concept confusing the issue -- but it remains at a higher near-term risk that ecosystem.

22. Waiting to see because the Delta Plan just came out and I believe there are major issues in the original intent and the extent the Delta Stewardship Council feels its authority is over all other laws and statues already in place. Specifically, the DSC should not have the approval authority at all with regard to the Bay Delta Conservation Plan. The Delta Plan should be a body to examine to determine consistency to the overall plans within the legal Delta (not approval authority).
23. Additional storage, especially south of Delta, is needed to allow "big gulps" and" little sips". Both big projects(enlargement of San Luis) and small (storm water retention) should be encouraged more than they have to date. Need more emphasis on near term "win-win" projects.
24. BDCP has degenerated into arguments about endangered species on one hand and the tunnels on the other. These arguments distract from the co-equal goals. The regulatory process/approach (Habitat Conservation Plan and Take Permit) may simply be too narrow in scope to adequately address the Delta. It has far too much the flavor of a proposed conveyance project that must be mitigated by a negotiated endangered-species / habitat-improvement bribe in order to achieve approval.
25. The Delta Stewardship Council has set itself up and its "consistency review" process as a probable obstacle rather than facilitator in furthering the coequal goals. Hopefully it won't play out that way, but they have provided adherents to the status quo with procedural and administrative roadblocks that will cost time and money. The lack of a levee investment strategy to protect state interests in the Delta is a major failure of the DSC after close to 3 years of "planning."
26. I believe there should be open and honest discussion concerning the situation where success of meeting co-equal goals might be mutually exclusive. There will come a time, some would say its now, where the amount of water available is less than the amount of water needed to meet California demands and the amount of water needed to allow Delta ecosystem restoration.
27. Federal and State Contractors should be held liable for the damage they contributed to in the Delta. Moreover, they should look elsewhere for self-sustaining and reliable water supplies. Oh, not enough water elsewhere to support the San Joaquin Valley agricultural activities of today? Perhaps it is time for San Joaquin Valley ag to follow the lead of Salinas Valley Ag. Change cropping, decrease acreage, rely on recycled water from Stockton, Modesto, the Bay Area, etc. Too big an undertaking? You think the Delta facilities including underground pipes are any less ambitious?
28. Twin tunnel will be disastrous for the Delta
29. There is still much uncertainty about exactly what will be done to restore the ecosystem and whether it will be the most effective type of action or "window dressing." The potential for misuse of a new conveyance system puts a huge shadow over the ability to truly meet the co-equal goals.
30. You cannot have a healthy delta by diverting the Sacramento River around it. The delta needs the fresh water flushing action of the Sacramento River.
31. any attempt to divert more water around the delta will collapse the ecosystem as experience has shown. Any attempt to divert water around the delta has shown to increase the salinity of drinking water in local municipalities driving up costs and health risks.
32. The Delta needs more fresh water not less! You clean out contaminants and promote wildlife by allowing it to "flush" and clean itself. The state should be investing in levy restoration and alternate means of water storage or desalination plants to provide more water. Building pipes and canals to siphon water away from the Delta is completely the wrong direction and needs to be stopped!

33. Water supply reliability does not mean water just for south of Delta water brokers. The Delta and its habitat and the terrestrial and aquatic life all dependent on water too. Making it possible to steal more water from the Delta as well as area of origin(s) north fails to address these goals. And we all know that these goals are not co-equal, and will never be addressed equally as long as greater water for the water brokers is the objective. Water export reduction is the correct answer. Ecosystem restoration without export infrastructure in the form of twin tunnels is the correct answer.
34. The BDCP refuses to listen to anything, but the Twin Tunnels alternative. Local involvement is totally lacking in the decision making process. Their science is not sound or peer reviewed. should I go on?
35. The Delta ecosystem is in grave danger if the tunnels are built. With the tunnels, there will be an irreversible incursion of salt water into the delta, damaging the ecosystem.
36. Tunnels, pipelines or canals will not help the Delta Ecosystem survive
37. If the Delta Stewardship council adopts the BDCP tunnel option, it will have failed in its purpose. The council should insist on adopting a fully vetted flow criteria before any further actions are taken.
38. How stupid is this group??? California needs MORE water, not redistribution of the existing water!! By the time this moronic tunnel project is completed it will already be "out of date" because of population growth. If there is a drought (and there will be one), the tunnels will be a DISASTER!! What is needed is massive DESALINIZATION plants located inland in the desolate areas close to the existing SoCal water distribution infrastructure. Creation of water storage in SoCal to put excess water, when the North can send water South in excess years---- NoCal is not a storage system. Desalinization will be an Insurance Policy to Guarantee water for all of California. California will be able to sell excess water to neighboring states to offset costs. Please see my idea as what it is: The SOLUTION, with water guaranteed for all of California. Thanks
39. Progress has been very slow. It is clear that the BDCP, if implemented, will result in extensive ecosystem restoration and will provide the operational flexibility needed to reliably provide urban and agricultural water supplies in a manner that not only minimizes impacts to fish species provides for their long term restoration. However, in addition to fixing the plumbing system of the Delta, it is also critical that we add water storage facilities (reservoirs and groundwater banking) to make effective use of the water supplies available in California for fish and people.
40. The tunnels project is HORRIBLE. It will destroy the ecosystems of the off-channel fisheries, and it will REDUCE water supply reliability, especially for residents of the Delta who depend on well water. I do not understand why more efforts have not been invested in desalinization plants, agricultural water restrictions and conservation, or local self-sufficiency requirements for those communities and water agencies in Central and Southern California.
41. The funds that are being expended could best be used to develop and install water desalinization systems. There is plenty of sea water (global warming?) and also excess power from power generating plants that could be used to process the water. LA and the water selling moguls are going to do what LA did in the 1900's -- destroy the environment to get water. I also think that the areas that are developing, who need water, need to take that into consideration and fund the desalinization projects. The water moguls should subsidize the projects. The politicians, e.g., Brown, Boxer, Feinstien, etc.) are too beholden to their benefactors.
42. You cannot trust anything the California politicians say or do!!, draining water at the rate proposed is as irresponsible as reelecting moonbeam to another term
43. Waiting to see movement on a statewide water environment investment plan...aka Water Bond. This movement could start now as the BDCP process proceeds this year.

44. The "low hanging fruit" ecosystem projects are too few and too little is being done to see if proposed approaches actually work. Meanwhile the attention is on the proposed isolated facility. There is no state leadership in addressing land use which is the most reliable water supply strategy available. This means that without state standards for efficient water use land use development, business as usual will create greater demand for water supply and thus greater stress on the environment.
45. Where are the mitigation solutions to all of the disturbance that will be caused in the delta?
46. It is quite simple. By pumping the freshest mountain water in 2X44' tunnels closer to the source (near Sacramento), it voids this water from cleaning the remaining water in the Delta. There is already a steady flow of brackish water infiltrating in from the San Francisco Bay to the Delta (higher concentrations found in Antioch and as far north on the Sacramento as Rio Vista). With the tunnels, there will be a great deal more saltwater, stretching north and east in the two main rivers.
47. Extracting more water from the current flow through the delta flow I would expect is devastating to its eco system. Technology and additional storage reservoirs upstream I would think could be very helpful. Reverse Osmosis/Desalinization I would think is a very reliable water source. Tunnels, Dams and or additional water diverted away from delta is not progress in the right direction.
48. Gov. Brown is going to destroy the Delta with his BDCP. He and Feinstein are owned by the corporate farmers.
49. We need to Desalinize L.A. Desalinization will deliver water even in drought years. It will save our Delta from the deeded L. A. Metropolitan water dist. that has already raped the Owens valley, and destroyed it. The people of Ca. want to desalinize L.A. and keep our delta free to clean out our S.F Bay. Sending clean water to Kern county polluting it and sending it back into the delta is not a good idea. Kesterson game refuge is a perfect example of what will happen to our delta. When they grow cotton in kern county they spray bad shit on it and is not regulated by the food and drug admin. Send the polluted water through Kesterson game refuge back into the San Joaquin river. This is why L.A. want's water north of Sacramento. All farmers in northern CA. will have to pay more for there water, the cost to send water to kern County is staggering. AND what do they do with our water build golf-corses in the desert. Palm springs. Sometimes they store it in a underground storage that the government built and then sell it back to us for a large profit. Thanks Stewart Resnick. Finally it is against the LAW to destroy one community for the benefit of another. L.A. needs to Desalinize. Thanks Tim McCabe
50. Seems like the Delta Ecosystem Restoration (DER) has NOTHING to do with Water Supply Reliability (WSR). They are two separate issues but have been cleverly combined to mask the issues. In fact the main cause on a need to improve DER, is based on the fact that current water that has been drawn out of the Delta and issues with existing pipelines and fish filters causing destruction of fish etc. So if degradation of the Delta is caused by existing water being taken out, to propose to take MORE water out of the Delta can NOT logically do anything but further harm the Delta. As far as WSR the proposed plans for taking more water out of the Delta does NOT create any new water supply or increase reliability. The net gain in new water is ZERO. WSR could be improved by pumping at peak times, but there is insufficient storage, or to look into local desalination at the local area needed.
51. Believe Tunnels will destroy ecosystem and raise salinity and ultimately reduce the water supply
52. BDCP is attempting to increase diversion, despite clear scientific evidence that too much water is diverted today. In addition, BDCP is ignoring water agency options to invest in local solutions and reduce reliance on Delta supplies. On the other hand, the State Water Board is taking meaningful steps to begin setting new flow requirements for the San Joaquin River.
53. A multi-billion dollar water shift experiment is doomed to become obsolete in 10 to 15 years when the tunnels are completed. By 2024 we will have improved conservation and desalinization to the point where

the tunnels won't be needed and the damage to both our state finances and the beauty of are Delta will have ruinous impact. Remember how we spent a lot of money putting cat 5 wiring in homes and offices and then wireless networking came along!

54. There is no way we will improve water quality or fish survivability by removing fresh water from the Delta. It is at a very critical stage now.
55. Water supply reliability can be increased by improving storage capacity
56. The proposed tunnel approach is an obvious pay-off to the wealthy mega-farms and Los Angeles Metropolitan Water District and does not wish to undergo scrutiny by unbiased research as to its' impact on the delta itself.
57. Stop Development in the Delta and surrounding areas.
58. The whole state program is a sham that will make a cesspool of the Delta and take the most fertile land in the state out of production (the Delta) to water marginal polluted (selenium) land on the west side of the valley as well as line the pockets of wealthy investors like Stuart Resnick and unscrupulous politicians.
59. Restore the levee system and take more conversations with local delta folks.
60. Why is there no water conservation plans and really this is about voters in southern California and the utilities company having enough money to buy Gov. Brown
61. San Joaquin and Sacramento County farmlands will be destroyed by salt water intrusion if you think you can take water from the Sacramento / San Joaquin delta and send it south. Your plan would give water to people who do not CARE about farming or ecological stability. They only care about money and they will sell their water rights to the highest bidder, regardless of the cost to farmers or the ecosystem.
62. First the gates, now the tunnels.... don't the elected and appointed officials have the responsibility to protect the environment for the benefit of the habitat and the people of Northern California? Why is their focus always on finding ways to abuse the environment for the benefit of political contributors???
63. The Twin Tunnels is an incredibly risky approach that once implemented will (probably) fail and there will be no going back at that point. The Delta is incredibly fragile and the TT project will take a chain saw when a scalpel is needed to help repair her. Who pays the price when this magnificent region is decimated?
64. The Delta needs additional fresh water flows to survive and be healthy. The tunnels will cause further impact and restoration plans are unproven to provide any real improvements. The way to get water reliability is to improve the current system (improved fish screens, operating pumps based on fish cycles and working to reduce export levels) and look for real solutions to increase water supply (groundwater recharge and resume desal) and conservation. Increase regional self-sufficiency.
65. I have been unable to determine from the "tunnel" plan how it would reduce the risks to the Delta ecosystem (other than perhaps some minor benefit to the Delta smelt)
66. When Jerry Meral says that the BDCP was NEVER intended to save the delta the co-equal goals have been abandoned in the interest of conveying more water.
67. BDCP simply is not the answer
68. No effort underway is looking at ways to reduce exports to levels that the SWRCB has already identified as necessary for ecosystem restoration. Creating habitat will not compensate for inadequate flows. The planned infrastructure cannot guarantee water to export users in periods of drought. The co-equal goals cannot be achieved by building conveyance infrastructure in the Delta. They can only be achieved by reducing exports and focusing on local and regional measures for achieving water supply reliability.
69. Funding for ecosystem restoration, no source, no guarantee, no plan

70. Since the governor's top guy, Jerry Meral has already admitted that saving the Delta is NOT a goal - the whole process is a sham!
71. We need equal ranking not like CVPIA where we lost complete compensation for water taken and no results from that water taken in making things better in the Delta. The only answer is to stop pumps.... Hasn't worked yet. Decide which delta benefits are wanted which will determine which species is preferred ... Can't have stripped bass if you want salmon bred naturally. Don't throw away the fish hatcheries they might be needed.
72. There is a substantial risk that climate change could substantially reduce flows in the Sacramento River basin - by 17% by 2020, and by 34% by the end of the century. DWR has not released the information about yields of the proposed twin tunnels under the drier climate change scenarios.
73. We need to decrease water exports and work to get the pollutants out of the Delta.
74. The Delta Stewardship Council has moved significantly away from the statutory requirements of reducing Delta reliance, while providing nothing of substance for meeting either goal. The BDCP is unlikely to achieve significant benefits for either goal, and the ecological elements of that Plan lack scientific credibility trading off ecosystems for water supply.
75. One group says that the project should be dumped and water conservation and recycling together with releasing more water through the Delta will take care of water supply and environmental problems while another group states more dams for water storage and less focus on Delta environmental problems is the right solution for California. Both are absolutely wrong but these confounding messages to a public that cannot be expected to understand the complexities of current and future California Water can be disastrous. My hat is off to Jerry Meral and others who are working diligently to fully address the Delta issue with good science and promote the co-equal goals.
76. Follow the money...Bechtel Corporation and the huge farm owners in the Kern County area are at the heart of this water grab. They will drain the Delta and have no regrets as they use water in a wasteful manner. We need to stop them now!!
77. The delta is one of the most important water assets in California and should be protected. The water supply should be used for the beneficial use of the people but is not unlimited and should not be the primary supply for southern California.
78. The Delta ecosystem is on the verge of collapse due to too much water being taken from it. Taking more of it will ensure its total collapse.
79. Water supply and quality are at extreme risk for more than half of the California population as well as the State's economic wellbeing ... and we are still playing territory games.
80. It is not clear that the co-equal goals are being treated in a uniform and consistent manner. While coordination and cooperation between the agencies appears to have improved, there is still large gaps in the provision of monitoring data across agencies. There also appears to be reluctance on allowing adequate oversight by such groups as the independent science board by the respective agencies. It is not clear on what agency will actually control the flows through either the existing or the planned systems.
81. Do not think the BDCP plan is bold enough, particularly with regard to water supply reliability
82. The co-equal goals are really mutually exclusive. You cannot save the e co-system by taking more water from it.
83. The Current plans absolutely fail to consider the long term implications for sea level rise in any realistic way. What good will it do to deliver more water to the Tracy Pumps if sea levels raise to flood them

anyway? This failure means that we would be pouring $ Billions into an ever acidifying environment... meant literally and rhetorically.

84. it is not clear how BDCP will address impact of Sac River diversion on delta water quality
85. Where is there mention that the National Science Foundation's recommendations will be followed? That is what I want to see.
86. Proponents of ecosystem restoration projects are often under-prepared for the permitting process and this stalls their projects (among other things). More work should be done to help proponents develop a blueprint for implementation (not just site selection and conceptual habitat design) so projects plan and budget accordingly.
87. Co-equal goals are not physically possible. Period.
88. The process has continued to forge ahead without considering good alternatives, including the reduced exports option. It continues to ignore Delta communities and upstream interests. It ignores the difficulty of restoration and the need for more, not less Delta inflow, and it appears to be willing to sacrifice California's salmon to irrigate impaired lands and fuel more sprawling growth. As long as it continues on this course, it is doomed to fail, and should fail.
89. The Delta Plan and the BDCP are taking us in the right direction. If BDCP fails, risk of failure for ecosystem restoration and water supply reliability will be critical.

Actions Progress

Please provide additional information and comments about actions that have made progress and are on track.

1. Not there yet.
2. BDCP refuses to listen to better plans like Dr. Robert Pike's plan to keep a maximum amount of water flowing through the Delta. More reservoirs are needed instead of a $50 billion plus twin underground canals that will wreak havoc on the Delta for more than 10 years and destroy entire communities dependent on farming and boaters and tourists.
3. You cannot restore the eco-system by taking more water from it. What the hell happens in a drought?? Nobody has addressed that yet!
4. Include local residents and landowners in the legal Delta in ALL aspects of Delta planning.
5. Outside interests have supplanted their needs and priorities over those where the surface waters originate. In addition, an accounting of all waters diverted from each stream & river has not been completed, hence we really do not understand what amount of water is available for export. Until the SWRCB completes this effort using a transparent methodology and makes every diverter scream with the same screechy shrill, then we really will not have the information needed to make a conscious decision.
6. Can't think of any.
7. Acknowledge that both co-equal goals must be met ... not just balanced where one benefits at the expense of the other. If a proposed Delta "solution" fails to meet both co-equal goals it should be rejected and a real solution sought.
8. Organizations are setup to deal with moving forward on co equal goals and have starts with ecosystem restoration and potential mitigation efforts.

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1. Delta Stewardship Council has adopted Delta Plan - good - but what's next? Need details on inter-agency coordination - Implementation Committee - and work plan. 2. BDCP - appears on track for Oct. 1 release of Draft Plan and Draft EIR, but questions linger about how adequately the BDCP addresses ecosystem restoration and integrates into broader water supply reliability issues such as storage, conservation and integrated regional water management. 3. DPC has made progress on national heritage area, Conservancy Delta Dialogues show promise.
9. Good work done on Ecosystem R&R. Seems like a good plan
10. The concept of tunnels to improve conveyance reliability is good. I have heard that Sacramento is in process of upgrading their sewage plant discharge from secondary to tertiary which is sorely needed to improve water quality.
11. The plan gets the right tone and goals for land use, water use efficiency and conservation, water storage, SWP and dam operations.
12. Though the BDCP is difficult to read due to its volume of material, there are private dialogs that are happening between land owners and the State that show promise. I think that the ecosystem elements of these talks will be addressed prior to the water supply reliability & public safety efforts. The Report card is very useful, though I question how consistent the ratings are relative to the recommendations for changing governance for some organizations. For example, what is the real public perception in different roles for DPC, DSC, and DC. These organizations overlap. Are they state organizations? Regional? What about the Water Commission and CVFPB?
13. Same comment as provide in previous question.
14. Progress is being made to gain more certainty regarding in- Delta water use. This information will help planning efforts.
15. Basically none is on track.
16. BDCP is on track if you call how long it's taking to be on track, but at least it's still going and the state and federal administrations seem committed to making it happen.
17. Preparation of the Delta Plan has spurred much good discussion, but the Plan itself does little to get things done.
18. We have a lot of governance but no one is listening, too many special interests not working together
19. Nothing is being shown to work at all !!!! Even the State group cannot show that this will have any possibility of working without destroying the Delta, the best farmland in the state, and all the jobs related to the Delta.
20. Progress has been made in moving the BDCP forward, although painfully slow. This includes defining specific conservation measures for both co-equal goals.
21. Well, if you consider a new governance structure that INCLUDES THE SOUTHERN CALIFORNIA WATER AGENCIES WHO ARE RAVENOUS FOR DELTA WATER, I guess it's a raging success. You're setting up a governance structure in which the foxes really are guarding the hen house, with no government oversight or balancing mechanism once the new board is set up. The water agencies, not the residents and not the voters, will have a veto-proof majority with the currently proposed structure.
22. See previous comments. Big money talks. The water moguls have one agenda -- get water and make money!
23. Stopping this insanity is the only acceptable progress
24. Talk about governance has begun.

25. You're attempting to short circuit the approval process in all phases of the project
26. The Delta Vision Strategic Plan is no match for the 2-Tunnel Project that Gov. Jerry Brown is promoting/pushing. There is not the ability to have a co-existence of these two visions.
27. STOP the Delta Bay Conservation Plan. This has nothing to do with conservation. It is a water grab by the L.A. metropolitan water district.
28. The people govern, not water boards and water companies. Californians voted against the peripheral canal but our voting rights are being usurped. The Delta needs levee strengthening and no one is addressing this need
29. How about the federal government's concerns about the inadequate research which has been done to move this project through? How is it that there is already work being done on preliminary work on the tunnels even though the project has not been approved?
30. Everything to date is a step backwards and increasing risk to the Delta.
31. Like that more groups are becoming more vocal on the importance of the delta.
32. Governance, where is the true non biased party to stand in the middle
33. Your obvious focus is on the ecosystem and the rest of the fall-out from your plan be damned.
34. The Delta Vision does not have sufficient political, public, and economic support to reach these goals.
35. Nothing done so far nor proposed offer change that benefits all Californians.
36. Ramming project down our throats. NO stakeholder consideration.
37. The creation of the Delta Stewardship Council was a significant step forward, but unfortunately the Council has dodged most of the tough decisions by saying that it is "only an appellate body." The requirements for regional water supply planning and reduction of use of water from the Delta was an important step forward, but water agencies have tried to dodge the mandate by weakening the baseline.
38. There have been significant steps by the Delta Watermaster and the State Water Board to address the water reporting issues systematically.
39. LA needs to stop their expansion and get under control. They cannot use water from 400 miles away for their supply without paying for all of the cost and should be held responsible for the ecosystem restoration and recovery. The past 50 years of use has shown us that the state project and the Federal projects need to be reliable and sustainable. All Water users and wrights need to be regulated with a governance that acknowledges goal 1.
40. Delta residents and stakeholders have been left out of the process. Their input has been totally ignored.
41. We are still talking ...
42. Some progress has been made on recognition of the co-equal goals and on water supply reliability. The co-equal goals have at least been acknowledged. Adequate governance to achieve those goals is very muddy. Water supply reliability has made some progress mainly by separate entities recognized a need to develop alternative supplies of water and by reducing demand via conservation measures.
43. Studies and independent science are real, credible and compelling. More work, real conclusions for planning are necessary.
44. The science is there and it competes with the political objectives of the BDCP. This is the third time the BDCP's science has been trashed when it is vetted. This is so ridiculous it's laughable.
45. Follow the National Science Foundation's recommendations.

46. The Governance structure and codification of the co-equal goals, as set forward in SBX 7 1 have got us on track and have helped us make progress.

Please provide additional information and comments about actions that are not making progress and are falling behind.

1. The projects inability to manage and or develop an available reliable water supply has forced delta and upstream interests to subsidize the export scheme in the form of inappropriate accommodation and regulatory burden. This is not a beneficiary pays solution.
2. Water supply and reliability needs to be balanced with agricultural updated practices on growing viable produce under present and changing conditions. That would mean changing type of crop / orchard - working and enriching the existing soil to provide more water retention materials, etc. Other active producing countries have done this - As a world producer of food - why not California?
3. I believe they need more governance especially with the BDCP pushing to install their twin tunnels which would destroy the Delta entirely and make known the dangers to the sustainability and recovery of the Delta if more water is drained from it.
4. It should ALL fall behind and be left there to rot--which it what it's really worth--rot.
5. This process does not and has not since its inception included our elected representatives in the legislative process nor local residents and landowners. We are the entre on your menu, never the invited guests.
6. An open discussion on how we anticipate distributing a limited resource. Suggest an All-In-Auction by David Zetland http://www.kysq.org/pubs/AiA_Final.pdf or http://www.sciencedirect.com/science/article/pii/S0301479712005956
7. The plan is being pushed forward without adequate cost/benefit analyses.
8. The ecosystem will not be restored or recover unless the current stressors are reduced, in particular, too much water diversion and inadequate flows, during drier periods. There needs to be more flow during the late spring, summer and fall and this will not be possible without new storage and the ability to capture more flow during high flow periods.
9. No regulatory commitment to make things happen from agencies and timing of delays is appalling.
10. Early actions - although a group convened by PCL and Westlands developed broad support of a wide variety of projects, little prioritization occurred and no clear path forward. Council's implementation Committee could play lead role.
11. Water supply reliability. Nothing tangible for water users to make an informed business decision based on cost, supply and reliability for the water supply portion of the BDCP
12. The tunnels probably still need to be coupled with some additional storage. Seems like this year we are seeing the value of storage, but could benefit with more. The Ag users seem to be especially hit hard, because after all will they turn off the tap to SoCal water users or the Agric community first? Is Sacramento really moving on their sewage plant upgrade from secondary to tertiary. I think control of striped bass (non-native species) has not gotten attention it deserves.
13. The fundamental paradox is that the plan will never be implemented if you piss too many people off. But you will never reduce risks to the Delta by trying to avoid pissing everyone off. To accept to few concessions from all is to assure both water supply and ecosystem integrity fails on most accounts. DV is silent on these realities but the omission is not lost on the other stakeholders. The CDEW is a good example. The RCRC and others are aware of the unspoken realities. CDEW is great if you believe the

problem with the failure of CalFed was that it was not authorized to piss people off, whereas CDEW (if it ever flies) will be so authorized. CDEW will be chastised, too, if it ever succeeds in reducing risks to the Delta, because the only way it can achieve the co-equal goal is by pissing off one or more politically influential Delta Water interest. The only hope is that the people who are not used to taking No for an answer, do the right thing, which is to take one for the team. For example, what is up with Hetch Hetchy. Without breaching one big rim dam on both the SJ and Sac Rivers, we got no sediment for raising tidal marsh elevations. It seems like sediment on Liberty Island is already equilibrating, marsh expansion is stalled, and we are going ahead with Prospect Is now? Is there another dam on the SJ system that it makes more sense to raze?

14. While the Delta Vision Strategic Plan is one of the best organized strategic plans and very useful, the co-equal goals make establishing a new governance structure problematic. A complete rethinking of governance is made and state/local roles need to both be tied to financing. Without financing and accountability, the ability to consolidate and establish clear roles is nearly impossible. As for Delta security, everywhere in the state is "unique and evolving," goal 2 really doesn't make sense to common taxpayers and the public. It is more important to actually acknowledge the Delta connection to everything else. I find Goal 2 very problematic.
15. The Delta Plan needs more improvement and clarity for Water Supply Reliability as co-equal goal.
16. Need more coordination of the 3 main planning efforts: BDCP, Delta Plan, and State Water Board Flow Standards. The flow standards are not getting enough attention from BDCP.
17. Each stakeholder group is resisting any compromise in the hope that its special goals will prevail to a greater degree. In particular, no one is stepping up to contribute toward improving and maintaining the Delta's non-project levees. BDCP's attitude is that the levees are someone else's problem. DWR is not spending bond funds (Prop 1E) on Delta levee improvements as foreseen and promised; their internal competition among divisions seems to be diverting the vast majority to urban areas and upstream project levees. The federal agencies are unable to contribute and are disruptive instead -- the Corps is too bureaucratic, slow, and expensive and FEMA has recently thrown a monkey wrench into efforts to qualify Delta levees for disaster assistance.
18. Levee Prioritization.
19. Talks have started about bringing science together under a master unbiased umbrella, but little progress has yet been achieved. The degree to which BDCP can bring in more stakeholders and effectively move forward is a big unresolved issue.
20. Public input and ecological studies are needed as well as cooperation of all factors, politicians are getting in the way
21. No plan that includes the Tunnels will work---- this is so obvious that I do not understand why we are even considering this DISASTER waiting to happen. There are no actions to show that the Delta will survive, how can it survive if the water is sent away???? The massive fish kill at the existing pumps is beyond belief---- just send the committee there if they want to be horrified to what they are already doing.
22. The division of responsibility and authority between the many state agencies, departments, boards and councils seems to be overlapping and counterproductive. Add to this the various federal agencies and the result is a quagmire that impedes progress of almost any sort.
23. The science says that there isn't enough water for reliable water supply to the current constituencies; yet the Board is planning to divert existing water flow to new clients. That's unbelievably bad policy. Second, the salinity proposals reduce the measurement points in the central and northern Delta, and concentrate (pun intended) on Southern Delta measurement points. So we will never know, until too late to rectify, if the salinity intrusion from the SF Bay is a problem until AFTER the tunnels are in place, and it's irreversible.

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Finally, the toxic sludge created from the tunnel drilling proposal will be stored close to existing residential communities, such as Discovery Bay and Walnut Grove. Have you people even LOOKED at a map when these proposals were put forth?

24. Not adequate representation from the residents in Northern California that live on the Delta. They are going to destroy a way of life with the 2 tunnel approach. The impact will be disastrous on future generations.
25. Why would destroying the Delta even be considered
26. Cooperation is missing as investment to restore the Delta is sitting on the sidelines. Movement is necessary...
27. At this time, there is no positive approach on production or conservation of water during high rain years. After attending several of the Stewardship Council meetings, it is obvious to the meeting participants that their only concern is in "water transfer" without intuitive science of what the cause and effect of this myopic water transfer will do to the Delta Region. In other words, the staff is being paid large sums of money (quarter of a billion dollars, so far) to give the Stewardship Council, obtuse data in an attempt to make-up their own science to fit their vision(80% of the water to the mega- agri rancher's and 20% to LA region). The Chairman of the Project, Jerry Meral, in public forum, is on record saying, "The Tunnel Project has never been about saving the Delta." And, has stated that the Delta is doomed. The Jerry Brown machine would now like to see Mr. Meral removed from his position. Is that for speaking the truth or for not continuing the deception?
28. Better restoration of the San Francisco Bay. Better fish management, the health indicator of the delta. Our delta is dying because of the water exports to the south. Better fish screens at Clifton Forebay. (A better system completely.) At the Clifton Forebay 250,000 fish are killed each and every week. In L. A. they don't care just get the water baby.
29. Ecosystem restoration efforts are moving very slowly. BDCP is at risk of gridlock. The Coalition for Delta Projects has reached important agreements about interim actions that could improve Delta stability.
30. Conservation of water is not being encouraged enough and no incentive are being offered at the state level.
31. Actions appear to be taken which have not been funded and not authorized. They should be halted immediately!
32. It's time to slow the pumping of precious water to the south that is being squandered watering golf courses and filling man made ponds and lakes as well as unnecessary lawns throughout the state. The pumps are the largest consumers of electrical power in the state and the largest producers of pollution through emissions from power plants. The pumping has resulted in the death of untold fish and the demise of the salmon industry. How green is all this?
33. State legislature not listening and especially the governor.
34. I would highly recommend a strong social media program, hire an outside company where you can reach millions of opinions without spending a fortune. The Edelman PR firm could help. Engage with other people who have had projects stopped from an environmental perspective and get their help.
35. You are fools to think that California can survive if you destroy the Delta and the allocation of water to the nation's biggest farming region. The ecosystem is doing just fine. California is going bankrupt thanks to people who think that shad are more important to protect than farmlands.
36. The agricultural, business and economic interests of those who are actually ON the Delta need to be emphasized and these groups need to be enlisted in the fight against the tunnels.

37. Governance - the current plan puts contractors in the driver's seat so can't protect the Delta. Ecosystem - recovery requires increase Delta flows per the SWRCB report. Reliability - Requires reduced reliance on the Delta and improved ground water storage and regional self-sufficiency. Delta vitality and security requires increased flows and DOES NOT need 10-15 years of construction through the middle, destroying key waterways and farms and leaving smelly polluting muck.
38. It is my understanding that references to healthy agriculture in the Delta have actually been removed from the Delta Plan. I'd be happy to learn that this is not true.
39. Cost benefit study, how much water can be taken, who will pay for levee repairs and improvements
40. The Bay Delta Conservation Plan continues to be driven by the large water export contractors.
41. Little project specific work is proceeding for ecosystem restoration with BDCP focused on conveyance and only looking at habitat from a programmatic level. It is unclear with the lacking level of detail whether habitat restoration will occur as envisioned. There also appears to be little in the short term to reverse the dramatic decline in the ecosystem. By the time habitat restoration takes place, it may be too late for many species.
42. DSC has provided essentially no governance; and the BDCP's governance structure is a disaster. No substantive efforts towards sustainable water use have been made. Delta vitality, by any metric, has not been a staffing, fiscal or other priority. Much like Delta Vitality, risk reduction is largely symbolic, with the exception of some of the efforts by CalEMA.
43. No one cares to hear from the residents, recreational users or the farmers who live and work in the Delta. This is a crime!!
44. Per the 2009 legislation, the Delta should not be relied on to meet future water needs and even less water should be removed from the ecosystem. Exports of water have disrupted the natural hydrology of the Delta ecosystem.
45. No real solution on the environmental health of the "delta". The historic delta and man's alterations have removed it from being a delta ... it is a bastardized supply conveyance system and unsustainable farming operation in an area that was a critical delta.
46. Progress needs to be made on effectively identifying control measures concerning flow requirements for the system that meet or at least balance the co-equal goals. The current release of the draft EA for BDCP is not clear on governance and where control actually lies. This has implications for the Delta as well as for ecosystem resilience.
47. Cost/Benefit way behind; governance discussions too tepid and modest; proposals for water supply reliability are way too modest, way too compromising.
48. The fish screens are not even designed yet. Also, what the BDCP is doing will not stop the pumps in the Harvey O. Bank plant from chewing up fish. Why not put the "state-of-the-art" fish screens in front of those pumps! Also, since the pumps must run, the rivers will still run backwards! Also, there is no real reason for building a separate forebay for Sacramento River water sans fish. This can only mean that the water is meant for fracking oil wells in Kern Coiunty!--a bonanza to the water contractors!
49. No one wants to address the question of whether the Delta remains viable unless actions are taken to address sea level rise. Without those actions, there will be no Delta... but no politician is willing to say that because the consequences are unthinkable in today's political climate. The current legislation fails to provide consequences for failure to achieve stated objectives. In other words, there is a disconnect between what Gov says it will do and what they actually do. The problems of CalFed's lack of regulation will be repeated and everything will fail when enough political pressure is applied.

50. The National Science Foundation's recommendations need to be your guide.
51. Improved integration to reduce flood risk in the Delta is still needed including improved emergency response plans among all of the various agencies.

State Agency Leadership and Effectiveness

Please provide additional information or examples of effective agency or organization leadership, management, planning, and implementation related to the Delta Vision Strategic Plan.

1. Congratulations to the Delta Protection Commission who had good leadership enough to declare they won't vote for the BDCP Plan. Two who get their paychecks directly from the state abstained, which is understandable that they don't have the guts to vote against BDCP. How any human being can support the present BDCP giant multi-billion Boondoggle is incomprehensible to me. They have absolutely no ethics. It's like when Tulare Lake, once the largest body of fresh water west of the MIssissippi River, was drained dry. These BDCP cult members are willing to steal 100,000 acres of Delta lands from farmers and enrich the mega-farmers like Stewart and Linda Resnick, buddies of Sen. Diane Feinstein, who enriches them every chance she gets.
2. Jerry Meral preaches transparency but has violated that hundreds of times. He cheats!
3. Delta Protection Commission and Supervisor Nottoli ROCK at representing the legal Delta and Sacramento County at the Commission and Council levels.
4. Delta Conservancy scheduling meetings in Delta communities
5. DSC - Adopted Delta Plan - implementation strategy unclear Conservancy - Progress on discussion forums to break barriers - heavy lifting can't occur without money DPC - Adopted economic sustainability plan, progress on National Heritage Area - awaiting change in leadership (chair and EO) SWRCB - substantial progress toward Delta Water Quality Standard update CVRWQCB - Ag waiver changes upheld
6. Governor Brown is doing a great job of inspiring his team and the state.
7. As I understand, full plan not out until the fall. So maybe concise products summarizing the problems and proposed solutions
8. Of all the agencies list (BTW, you nailed the key state player list) I feel that the CVFWQCB might be in the best position to advance the goals of the Delta Vision plan *based* on its limited authorities. This isn't as much a reflection of any agency, but rather the difficulty the others have in (1) maintaining a State (i.e. the people who will pay for the Delta) perspective, and (2) the ability to actually make change. Until governance & financing issues are addressed, it will be difficult for any of these ratings to change.
9. The table speaks for its self premised off the assumptions listed in question form above.
10. This is self-serving, but I feel that the Office of Delta Watermaster has developed effective information gathering and compliance/enforcement programs. Delta Watermaster Reports are also bringing attention to key policy issues. DWR participated this year on a project to buy water from senior water right holders on the Stanislaus that helped meet delta water quality standards and also provided needed water to users south of the Delta.
11. DWR's Delta Levees Program has the ability to be effective in improving and maintaining Delta levees but it is hamstrung by the higher levels of DWR management.
12. Decision boards are stacked with Pro SoCal advocates that are so narrow minded that they are not looking at the big picture----- A guaranteed water supply for all of California that will give us ALL water even in a drought.

13. The Resources Agency has done an exemplary job in promoting the BDCP in a responsible and science-based manner. The Governor's office has shown very strong leadership in its promotion of the BDCP to do what is right for all of California.
14. None that I've seen. This issue has been relegated to Water Board meetings in the middle of the week, with little to no notice, and with critical documents not available before the hearings. Brown's administration seems to only care about a water legacy to mimic that of his father - and no one can explain why major surgery on a delicate ecosystem is preferable to non-intrusive solutions such as desalinization plants.
15. The Brown administration is on a roll to build his legacy, irrespective of what the public. The Boards seem to be heavily weighted in favor of Southern California water needs. It also seems that the solution to this is a massive engineering project. I do not feel that enough research has been made. The California voters approved a bond measure to restore the levees and I don't see that happening on the southern or western part of the Delta. Are the funds used elsewhere? The State also, seems to be sidestepping the full cost benefit analysis -- where is it?
16. Strategic Growth Council which supports purposes of SB 375 only has grant powers and no regulatory authority for land use. This is also true for OPR. The state needs a land use oversight and enforcement agency to ensure state policies are implemented and enforced. If a general plan goal is for compact development and mixed use and yet does not meet performance measures, then little progress will be made in implementing these land use strategies. The market place and public investment in infrastructure is more compelling that local and state land use policies.
17. The quality of the water is lower today, than a decade ago. More water leaves than can be replenished. Most water agencies have failed to protect their resource in draught years, to the level necessary to save the environment.
18. The people of C.A. don't get to vote on these issues. We voted the peripheral canal down and now we want to vote the two tunnels out also. (We want to Desalinize L.A.)
19. Seems that "town hall" type meetings are being held by the agencies and people field questions and then the agencies just "nod their heads" and take notes and not much seems to change.
20. The scientific community has been providing valuable and useful information regarding Bay-Delta management. Unfortunately, in many forums, this input has been largely ignored.
21. Total failure to resist political lobbyist's pressure.
22. What I see is a powerful coalition of monied individuals who are going to do something which is going to cost taxpayers billions of dollars and destroy much of the present delta without any regard to those of us who live in and depend on the delta area for our livelihoods,.
23. All the above commissions should be abolished as the best they are doing is burn tax payer money.
24. None that I am aware.
25. really if it is a government organization, Gov. Brown can rule the outcome through back door politics.
26. The people who are trying to talk some sense into the leaders of this insane project are the only ones who have any idea of the negative outcomes of this project.
27. The legislatures 2009 reform act had good direction a d goals about reducing reliance on the delta and starting with delta flows. The Delta Protection Commission and Northern California legislature have gotten a lot of focus and words in the Delta plan about the value of the Delta as a Place and the needs of the Delta Communities and value of boating and recreation to those Communities and California. About the value of fish and the commercial salmon industry.

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28. Since this "Planning" has all been a bunch of lies to reach a forgone conclusion - public opinion be damned, the government dunderheads are just going to do whatever they want. Public opinion has no input.
29. It's been a Mexican standoff for the last 3 years.
30. All of the agencies are in bed with the water contractors that are bleeding the Delta dry for millionaire farmers.
31. Identified in question 3. The DSP-ISB has made some strides to apply an integrative approach to the issues. Still lacking a post-Calfed action-oriented philosophy.
32. This survey is another way to waste government money!!!
33. The Delta Vision Strategic Plan has been extremely effective in ignoring and discounting the 5 million people that live in the 5 Delta counties.
34. None ... all 'turf' protectors.
35. Delta Stewardship Council has prepared a final plan and has been active in soliciting participation and actions by SWRCB, water master, and others.
36. Jerry Meral is doing a Herculean job, but he's one man.
37. The plan is foiled from the beginning. It might just as well try to make water run uphill. This is the worst-constructed public works project ever. It should be put to a vote of the people, but Jerry Brown doesn't want to risk that. Brown is ultimately to blame. He's trying to please the oil companies, the chamber of commerce and the business roundtable all at once and it is going to fail! And it SHOULD FAIL!
38. The very fact that you had to list so many agencies is fundamental to the ability of government to avoid blame when it fails yet again.
39. Everyone thinks this is the governor's way of completing his father's legacy of water for all and screw the fish.
40. Leadership, Management, Science and Coordination are effective across the board, and are increasing in effectiveness.

Please provide additional information about how specific state agencies or organizations need to improve related to the Delta Vision Strategic Plan.

1. Each of these agencies are wedded to their parochial interests and have failed provide any sense of coordinated action to problem solving; just a new version of old turf wars.
2. They need to be honest rather than follow the Governor's dictates. They have no conscience.
3. Again, genuinely include local interests from elected officials to the old man next door. Do not placate us or try to fool us with stakeholder garbage. WE ARE THE STAKEHOLDERS.
4. Reading the Delta Vision Strategic Plan and then linking actions to each element of the plan. Too much hand waving and double speak by the likes of Phil I.
5. A Delta solution is desperately needed. A great opportunity is being lost by allowing the process to be funded by the export water contractors and giving all control of the process over to the export contractors. The governor needs the exporters to be reelected. The heads of DWR and DFW know better but like their jobs too much to provide real leadership in seeking a real solution. The only solution would be to dedicate state and federal money to planning and analysis of a Delta solution that is based on the original BDCP planning principle: "Divert more water in wet periods and less in dry periods." Storing water when it is

available so it can be used when water is not available is Water Resources 101. Director Cowin knows that but does not act. Fish need water to survive. Director Bonham knows that and the Red Flag memos made this abundantly clear ... but he will not lead. The junior water right holders should not be permitted to continue to direct the process at the expense of senior water right holders and legally-protected stakeholders in the Delta.

6. Administration - strong support for BDCP, but no mention of broader water plan necessary to make it succeed. CVFPB - adopted Flood Plan Framework, but meaningful plan still years away and little integration with Delta's non-project levees. CDFA and CalTrans - largely missing Legislature - a couple of informational hearings but most weren't involved in 2009 package and so little commitment to bills or existing bond.
7. Failure to characterize or level up with the public and stakeholders (ye$ there i$ a difference and that i$ part of the problem) about the sacrifices required to recover species and the substantial uncertainties in trying to create a more functional ecosystem. We may think that feasibility and viability are one thing, but they are not. Here is an executive summary we need better represented in the plan. 95% of CA wetlands have been lost. The plan asks local jurisdictions, state agencies and JPAs to restore 30% of the lost wetlands according to the science and engineering guidelines developed through the CDEW. financial assistance from the state in meeting these goals will be available. Projects that qualify must be coordinated with local/CDEW/Resource/Water Agency resource liaison teams. Projects include, off stream and GW storage, land acquisition including Eminent domain if necessary, passive restoration, depaving and General Plan overreach remediation...
8. DFW needs to focus more on taking a systems approach and not species-by-species approach. This is a common failing of Resource (regulatory) agencies, in large part because the science is difficult to understand in an estuary -- I used to describe the hydrologic trends on an annual basis and there is no silver bullet, simple rule of thumb (this also is what makes estuaries fun and interesting). Dueling science and over-specialization have destroyed real public communication and any attempt to sincerely track progress towards specific objectives. So what if the objectives aren't reached, science would suggest you learn from this and adapt ... but funding means somebody else will get your money. The DPC is also worth noting ... its focus has been entirely local and undermines credibility in scientists and other organizations. This hasn't helped the Delta at all.
9. The Delta Stewardship Council has attempted at a specific Delta Plan document as well as EIR document. The basic charge for the DSC is to determine consistency for various projects with that plan. I believe it is structurally dangerous for any approval authority to reside solely with the DSC. I do not beleive there is the proper oversight nor proper 'checks and balance' for this body as it boldy believes it has certain authority not given to them by the California Legislature.
10. Resources Agency can do a better job looking at alternatives.
11. They need to come together and work out an integrated implementation program for the Strategic Plan.
12. BDCP is not listening and most others are not either.
13. All agencies need to jump on the "Water for ALL" concept that Desalinization will provide and dump the redistribution of "inadequate water supply" that the Tunnels create. Northern California water is not a reservoir to be tapped ----- it is not a guaranteed supply, especially if you look at the population when the project would be finished.
14. Instead of using misinformation and fear-based tactics, the Delta water agencies should embrace the BDCP and seek to improve it rather than stop it.
15. They need to scrap the Tunnels Project, and start over with a plan that might actually PRESERVE the Delta, its water reliability and water supply to new clients. The Tunnels project strips deeded water rights away

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from current senior water rights holders; it provides water to big corporations who are newcomers to the Delta, while sacrificing local farmers with family-owned land; and it will increase the brackishness of the water so that a major recreational site for the state becomes a drastically reduced and dramatically changed recreational area.

16. There is too much pressure from the agriculture and the water brokers on the agencies. The ag business has developed acreage that was fallow for many years, got some water, developed it in bountiful years, hurt in lean years, and lobby for more water at the expense of the environment. The fertilizer and manure runoff that is poisoning the Delta needs to be addressed now and not left for future generations.
17. Many of the agencies have existing authority and state policies that suggest better land use decisions and yet CalTrans, for instance, is participating in widening or improving upstate highway 12 across the delta for increase commuting between Stockton, San Joaquin and the Bay Area.
18. This project is a water grab by southern California water districts . It is all about the money
19. Delta Stewardship Council is based on false assumptions regarding the natural flow of the Delta Region. Because of the previous back-room deals with Billionaire Rancher's, there is stigma regarding the ever-growing water grab. The true cost of the 2-Tunnel Project to the Environment and to the Tax Payer's of California will be catastrophic. There is not one drop of additional water being created. Only the transfer of the best water in the Delta, directly "tunneled" to Southern Agri and LA Water District. Leaving the communities and farmer's in the Delta Region with a Low Quality water source. It is not a Delta Vision Plan, it is a 'water grabbing' plan, at a very high cost to the Delta Region and the Tax Payer's of California.
20. Desalinize L.A.
21. See above.
22. See previous comments on BDCP.
23. State water board needs to listen to scientists, conservationists, and Delta property owners (like me) who clearly see the dangers and waste that the two tunnels project poses.
24. They need to be willing to subject the plan to totally objective scientific analysis before proceeding any further.
25. Protect the Delta smelt via State fish @ game.
26. Stop the pumping.
27. No one should be making decisions about the Delta if they are not immediately impacted by those decisions. Few of the decision makers have even been to the Delta, yet they are making decisions that could potentially destroy it and all of the entities it benefits. The Delta not only provides irrigation to farmlands; it also provides recreation to millions of people every year. Your plan will destroy the economy of California in so many ways.
28. As said above, the legislatures 2009 reform act had good direction a d goals about reducing reliance on the delta and starting with delta flows. But they were ignored by the DSC. While there are good words in The Plan, the Delta Plan has nothing concrete to support these words hence the BDCP is going in totally the wrong direction and needs to stop work.
29. Still waiting for flow criteria that will meet ecosystem needs. Still waiting for allocations to realistically align with supplies.
30. If all of the leadership within DWR was vacuumed up and put in a container it would fit in a quart milk carton with room to spare. There exists no more a drain circling, internecine back-biting, ineffectual

government bureaucracy in the State of California than DWR. Masters of platitudes who consistently dodge dealing with the critical issues.

31. The Natural Resources Agency needs to ensure that both the letter and the intent of the Delta Reform Act are implemented, and not let DWR and the water export contractors run everything. They need to be guided by the results of the science and the modeling, and not attempt to push through a strategy that was crafted before the full model results were known.
32. The Governor's Office and its appointees in DWR and Resources appear to fail to grasp the both the complexity of the co-equal goals in terms what possible solutions might exists and how to apply them, and their objectives roles in maintaining the problems.
33. Involve the people from the Delta region.
34. They all need to heed sound impartial science instead of listening to paid for science provided by those who want Delta water.
35. Look seriously at a plan that was proposed in 1985 by A. MacNeil Stelle for a National Recreation Area. The "stream flows" can be recreated.
36. Two primary state agencies, CaDWR and CaDFW could provide a more transparent and collaborative environment concerning information being developed by the respective agencies. This is particularly true for monitoring activities and flow regimes. This is also true for federal agencies involved in both water supply and wildlife monitoring activities.
37. Contractors have stepped up with money and effort, but they need to do more, and have a clearer vision of what they want, and they need to execute a plan.
38. They need to do their assigned jobs and forget trying to fit a pre-conceived plan. This is so ridiculous it will be the laughing stock of the water industry. It will end up splitting the state. After all, it merely a more sophisticated water grab and is an ugly blot on the political process.
39. Legislature needs to eliminate overlapping authorities. In the long run, such problems will only be solved by moving to a system of watershed based adaptive management.
40. The only agency that is doing anything for fish is the water resources control board.
41. Across the board there are Capacity issues - primarily due to insufficient resources/funding/staffing. There are lags on Action and Accountability.

Federal Agency Cooperation

Please provide additional information about federal agency participation and cooperation related to the Delta Vision Strategic Plan and work to achieve the Two Co-Equal Goals.

1. Same comment above, parochial turf wars.
2. I have been shocked to see how the U.S. Fish & Game, which holds the only veto power to block the twin canals, has been the fox in the chicken house on this entire insane project with a very big conflict of interest. William K. Reilly, a member of the original Delta Blue Ribbon Task Force, who once was an administrator in the E.P.A., has obvious conflicts of interest--including being a business partner with Richard C. Blum, darlin' Diane Feinstein's husband, who has big financial interests in a major tunnel building and construction companies, Tutor Perini, and URS. The public needs to know more about such conflicts of interests and these behind the scenes puppeteers who make millions of dollars on these public works projects and don't care about people like the Delta farmers. I also think a lot of this Delta water will go to oil companies for fracking in Kern County. I think that is the REAL reason the Federal government is

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pushing so strong. If it were just Jerry Brown, it would be a joke, but he has the Federal government with a secret agenda behind all this working in tandem with Brown.

3. KEEP THE FEDERAL GOVERNMENT OUT OF THE DELTA...LET THE PEOPLE OF THE DELTA MAKE THE DECISIONS.
4. I am not and have not been impressed with federal participation, especially in the BDCP process that must be incorporated into the Delta Plan by law. BDCP is a fraud, fraudulent process and rife with corruption.
5. The federal resource agencies have been at the table from day one and have expressed rational and logical needs for a successful permit process. The contractors have strategically ignored this input and the end result should logically decline the acceptance of the permit.
6. Reclamation appears to only be going along for the ride. They are not funding the planning and analysis effort, but that does not mean they do not have a major responsibility to ensure the CVP does not continue to contribute to the decline of the Delta ecosystem. The USFWS and NMFS staff, through the Red Flag memos, have shown true and brave leadership but the whole Obama administration needs to get behind an effort to truly restore the Delta and improve California's water supply. The current BDCP proposal does not represent a valid sustainable solution. In fact it represents additional harm to the Delta and its ecosystem and will merely take water from senior water right holders and give it to junior water right holders without creating any new water.
7. Federal participation/cooperation mostly behind-the-scenes of BDCP. USGS - committed to good science in Delta and on groundwater and subsidence issues. Bureau has funded independent science panels on BDCP
8. Leadership in USFWS and NMFS is outstanding in their support. Need real buy in at the staff level for this to be successful. Hasn't happened yet. Mike Connors has been outstanding for USBR and the fed team.
9. Feds have an interest due to CVP, but State WP via DWR seems like they should control the activity associated with the Delta. Since Central Valley and SoCal users have such a large stake in outcome, agencies like MWDSC should probably be involved with design of the solution. They just finished a huge Inland Feeder Tunnel project.
10. Will matter less and less what the feds do as Peak Oil continues to cut into federal revenue cost sharing with states...
11. Aside from a few forward thinking individuals working for the Federal government, the Federal government has no clear vision between agencies and outsources most real technical work to consultants. The Federal participation in meetings is as a passenger, though managers sometimes act as though they are committed (but you don't see this in their planning / documentation) or granting programs. That said, it is the State's job to highlight why this estuary is of national importance and worthy of consideration on par with Coastal Louisiana.
12. Too much silo thinking.
13. The Feds are standing on the side lines waiting to see what the BDCP comes up with and if it can withstand the legal battle that it will bring down on itself. They really don't want to commit too soon.
14. Federal agencies should be the first to say ------ you have got to be kidding, there is no chance that this will work. You are trying to control a water supply that is a major variable. SoCal users want something that is not available as a constant resource and would kill the Delta if the tunnels program is implemented --- take into consideration the already dwindling water supply as Global Warming continues and again what about DROUGHT????? What about salt water intrusion destroying the Delta farmlands.
15. I know little about the Federal involvement in this area, so N/A.

16. Bias to big business and money pressure from elected representatives. Lobby groups are too strong.
17. The federal agencies need to hold the state to the same standards as all projects of this magnitude
18. Who Will Desalinize L.A. Nobody in government is appointed to study this WHY This is our best solution and environment solution for the future.
19. Federal agencies have largely conceded leadership on Bay-Delta issues to the State, despite strong federal interests in Bay-Delta management. Federal fishery agencies have shown significant courage in providing scientific input to the State Board and BDCP.
20. Haven't seen much input from these agencies!
21. They are just more bureaucrats trying to justify their jobs of sucking the blood of hard working tax payers.
22. There is too much involvement by the federal government. They have no idea what is going on in the Delta. The decisions should be made locally by people who will be affected - farmers, landowners and people who appreciate the deltas and enjoy the benefits it provides those who actually live, work and recreate here.
23. I've said all I have to say... these Federal groups are beholden for their leaderships' appointment to elected officials who are beholden to the monied interests. They don't have, even on the eve of their upcoming retirement, the courage to do and recommend doing the right thing for the Delta and its environment.
24. Sorry, am not up to date on recent actions of most of these agencies.
25. The fisheries agencies are TRYING to keep science in the forefront.
26. US Fish and Wildlife Service and the National Marine Fisheries Service deserve a medal for standing up about the biased modeling by DWR and refusing to approve a deeply and fundamentally flawed plan.
27. USBR and the USACE both seem, at the administrative level, to lack any interest in supporting the co-equal goals.
28. The federal agencies have not been visible so I cannot access their cooperation.
29. DWR & BOR employees have a revolving door with water contractors. All BOR cares about is destroying the Delta for So, CA.
30. Too slow, too nebulous, too captured by environmental interests.
31. Obama has promised help to Jerry Brown in getting the EPA to pass the BDCP plan. This in itself is a move that shows the "fix" is in with the Feds. Obama wants California to contribute to the national plan of making the US an energy exporting country, but California is never going to make it. The BDCP is doomed!
32. I am sorry, but do not have the background info to properly assess the functioning of the Federal agencies. I would suggest getting Dan Bacher's take on this.

Stakeholder Participation

Please provide additional information about constructive stakeholder participation related to the Delta Vision Strategic Plan and subsequent implementing legislation.

1. I admire the Delta farmers who are fighting this insanity the best they can, but it is a David and Goliath story yet to write the ending. The Delta communities are all very concerned they are getting steam rolled. This entire BDCP plan pits farmers against farmers--a civil war, North and against the South, which is sad. The BDCP plan has angered the entire boating industry. I write for boating publications and know we are

all upset how this canal will plow through the center of the Delta, where people come to enjoy a serene piece of Heaven in places like Mildred Island... which is really a lake within the Delta. If construction starts, it will become a nightmare place with a 300 foot boat dock, huge night lights and 24/7 construction chasing all boaters away, and millions of dollars will be lost in tourist dollars and put many marine oriented businesses out of business. The jerks in Sacramento and Washington D.C., again, could care less. I asked one of them if they had ever been on the Delta. "No," was the reply. I invited that man to go out on our boat, and he said he'd like to do that, but never called me to follow up. A Delta farmer in risk of losing his land to eminent domain said, "When BDCP bureaucrats come out here, they treat me like I'm not even a person, just a piece of land."

2. The only real representation given to the five Delta counties has been the Delta County Coalition, the DPC and other Northern California watershed organizations.
3. Balanced and transparent process is the fundamental need and requirement. Balance and transparent is not what is occurring despite continued expression for the need. Who will stand up and tell the governor and others "they are wearing no clothes?"
4. Urban and Ag exporters seem focused solely on BDCP, other urban and ag districts have some focus on efficiency but mostly on protecting their interests from BDCP Delta counties and Communities focus solely on anti-BDCP efforts Environmental orgs seem split on support for a BDCP that can be permitted, those who support portfolio approach do so to limit tunnel size by fiat rather than science Other groups seem sidelined awaiting official release of BDCP documents
5. Real polarization still exists.
6. Actually I think that the agricultural water districts understand the importance of water supply reliability and also the trade-offs that are associated with land use changes. They actually could play a larger role, but thus far seem to be best equipped to talk to others and are more trusted than other local, state, and federal perspectives. When the organizational perspective focuses on "my water" or "my land," their public dialog is rather self-serving and takes the focus away from governance and science issues and straight into the political realm of emotions: "mine, or I will help you not."
7. Most of the organizations listed above have been pretty engaged. However, I have watched how disrespectful the chair (Mr. Isenberg) has been in situations when the points argued didn't match his personal opinion. The Delta Plan should not be about a particular person's (especially the chair of the body) personal opinions. I believe the DSC would be better served with a different chairperson. This is my belief based upon months of viewing the meetings.
8. Not enough cooperation and willingness to adopt and fund a program of comprehensive improvement.
9. Stop the twin tunnels.
10. Almost everyone is too entrenched in their positions. A new vision that moves us forward without position based bargaining and political spin is badly needed.
11. They have not been allowed to participate in any meaningful way, unless they already drank the Kool-Aid.
12. All these groups need to realize that the Tunnels idea is about as good as filling a Dirigible full of Hydrogen gas to make it lighter than air ----- one Drought (flame) and Major disaster. All responsible agencies should be jumping up and down screaming that this is a mistake. Desalinization Please!!!!!
13. The only reason this political hot potato has gotten ANY press and visibility has been because of local area organization, and that of Environmental organizations.
14. Each of these organizations have their own focus. It seems that water for the population and agriculture come first. The source of the water is the principle question that has to be answered -- that is why

desalinization is the most reasonable long range answer. We have an abundant supply of natural gas -- why not power the desalinization processors. This is not an impossible problem for American genius to solve.

15. We do not want this project. There will be a major collapse of the Delta Ecosystem if this project is implemented
16. The water lobbyists and their wealthy donors are currently pushing their own agenda, with lobbyists contributing to California Legislature. They cast a dark cloud over the Delta waters.
17. Desalinize L. A.
18. The urban water agency community has been divided in the past year. Some urban agencies are working hard to reduce reliance on the Delta and have urged BDCP to move in a more productive direction. Other urban agencies, like export agricultural interests, have largely focused on efforts to increase exports.
19. As far as many of us can determine there is virtually no effort being made to present an objective analysis of this proposed boondoggle.
20. Only the Delta communities and water origin counties trying to protect the Delta from becoming stagnant are beneficial. The rest are shams.
21. I do not know how to answer this question because I do not know all of these organizations.
22. If you do not live in the Delta, farm in the Delta, or recreate in the Delta, you should not be involved in a process that determines the viability and future of the Delta.
23. Since the stakeholders who should be listened to are being ignored and current plans will not accomplish the co-equal goals, in fact, will not accomplish either side, all participants have either not been allowed to or do not want to find a true solution; hence all need substantial improvement.
24. Local and counties of origin have NO SAY in this project at all. To say differently means you have no understanding in this process.
25. Many environmental and fishing groups have attempted to provide input to the process, but have been largely ignored.
26. There are more positive than negatives here. The Coalition to Support Delta Projects seems to be an important venue for this process.
27. These people are all over the map -- their help seems to be based on geography. Once again, I cannot rate.
28. This is a loaded question. People wanting to save the Delta are being left out of the process so how effective can they be.
29. You bomb this question with "constructive."
30. In some cases, it appears that there is still a very real need for cooperation. There have been and will continue to be conflicting arguments presented by the parties that have either an interest in the Delta or in the water supply. Perhaps the Delta Stewardship Council will be able to play the role of mediator in what has been a very divisive topic.
31. Agencies have done a fine job of conservation and dealing with the hand they've been dealt. They need to take a more proactive and coordinated (amongst themselves) role
32. My answers are based on the fact that the word has gone out that the tunnels WILL be built and all these agencies are stretching their oversight in that direction because this is more of a political project than a

public works project. The fact that the people cannot vote on what is in reality a public works project will eventually sink the whole deal.

33. I look at the ability of so called consultants to work both for agricultural interests as did workers for Westlands and then help write regulations to be one sign of the inevitability of eventual failures.

Barriers and Constraints

What do you see as the major barriers and constraints in efforts to achieve the Two Co-Equal Goals?

1. 1) cost and regulatory burden 2) benefits accrue to regions not affected by the solution impacts
2. 1. Jerry Brown. 2. Dr. Jerry Meral, who is now trying to bribe Delta area county supervisors into cutting a deal behind the scenes. 3. Sen. Diane Feinstein. If the press can show all the corruption behind the scenes and how big money is controlling all this, it will blow up as a huge scandal. The BDCP plan will win only if the general voting public is so busy and apathetic that they ignore it until it is too late to block it, but that is what Gov. Brown and his cronies' entire strategy is banking on. I'm not a gambling man, but it is becoming so easy to see that Sen. Feinstein's husband Richard C. Blum's companies will get the contracts for building the twin canals, just like his Tutor Perini Corp. in Sylmar got the contract for the bullet train, even though the company ranked the lowest in all the stated criteria over other bidders... including safety!
3. California watershed and water sources have been compromised for decades. Water flow levels, diversion canals, et al. have impacted water quality and fish populations. Levees, water flow designs implemented over 60 years ago need to be reviewed and changed to address problems caused by current system. Agricultural practices have not been focused on soil health or soil water retention. As weather patterns change, type of food grown needs to be pro-actively reviewed and changed.
4. They are mutually exclusive and will NEVER be do-equal. Also, they only exist to have a law on the books to cover actions that will harm the delta--"Well, can't help it, it's the law.
5. As written the two co-equal goals are mutually exclusive, in my opinion is flawed legislation...including Delta as Place. These three goals are not attainable when one is literally being pitted against the other. Until the Water Board defines the minimum flows through the Delta, everything else has been a waste of money and time.
6. Not enough water, not enough storage capacity, historical perception that users "own" the water, overdraft of groundwater resources. There would seem to be a need to better manage water use and measure water use transparently. Recognizing the perceived intangible benefits of flowing water passing through the ecosystems.
7. Putting aside all the economic, environmental and institutional barriers that preclude serious debate and discussion/
8. Without new storage and the ability to capture water during high runoff events, it will not be possible to meet both co-equal goals. Balancing water supply (for Southern California only) against the Delta and Central Valley ecosystem) is not "achieving the co-equal goals." The fact that $250 million has already been spent does not mean the current proposal is a good one .... sorry, but if you ignore the persistent and good advice of affected stakeholders, fishery agencies and other, you will waste money and valuable time, and will need to pretty much start over.
9. Delta-centric opposition with little incentive to support solutions. They seem to believe that the status quo is good for them or that the only acceptable solution is to take water away from the rest of the state.

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10. Willingness of the affected parties to compromise.
11. Balance bedeviled CALFED - it affects the coequal goals, too. What's first? How much? Firm conveyance plans, visions for restoration - is that coequal? Trust - everyone has their favorite horror story, often compounded over the past 30 years.
12. The co-equal goals are inherently impossible to achieve. Some stakeholders are trying very hard to find a resolution; others are simply taking advantage of the dilemma.
13. Water users aren't receiving benefits necessary to invest over $15 billion. Delta and Bay Area opposition remains high.
14. Farms with peat berms to protect them should probably not have been allowed. Just a poor place for farming. Too risky, but now, how do you move them out and let some of these depressed land masses return to Delta?
15. Two Co-Equal Goals are too narrow.
16. Infrastructure protection and ag protection in Delta are not realistic. Some things will have to be abandoned. Oxen will be gored. The plan is silent on the problem of too many oxen, which may actually be a good thing? As well, very little is known about the cumulative effect of the proposed 25k/30k acres restored in Suisun/Delta by 2040. Liberty island already shows signs of sediment equilibrium in North Delta and we are planning on brining Prospect on line? It's time to think the unspeakable and dedicate one large rim dam on the SJ and Sac systems for decommissioning. Work out the sediment/water quality issues and get that bedload back into the system to raise elevations. In light of the ruling that we subordinate other uses for species recovery, there is no other way to meet DV and other planning goals. Let's get real. All areas and interests in the State must take a hit. the plan will not work unless it pisses off more people. To accept fewer concessions from all is to undermine the ultimate success of this effort.
17. I actually think the co-equal goals were off to start with. They ignore the public safety issues and land-use (emotional and very real) attachments locals have. Ecosystem restoration means converting land from ag (nobody can afford to relocate subdivisions or get into brown fields developments), and by focusing on just two legs of a three legged stool the dialog is off from the get go. This then makes it very hard for anybody to agree to a governance change where land values are not treated nor for the rest of the state to be willing to finance what might be seen as a government subsidy for somebody else.
18. 1) Too many bodies trying to seek some sort of approval authority (which are counter to each other's charge). 2) Personal opinions to actions that are not based upon fact and the best science. 3) Funding would be a constraint insofar that the public portion for ecosystem restoration isn't lost in the mired listing of non-Delta projects that is contained in the current Water Bond proposal.
19. Money and political will.
20. Governance structure - it remains to be seen whether the authority granted to the Delta Stewardship Council will be adequate to improve the Delta, and whether it will exercise that authority to the extent that it can.
21. Intransigence relative to stakeholders' selfish objectives and agencies' legislative / policy mandates and turf.
22. Jerry Brown and agri-business.
23. Data gaps in the science hampering decision making. Antiquated water rights system based on date priority and not beneficial use priority. Size and complexity of the physical system and the number of overseeing agencies with competing agendas.

24. One cannot simply declare something to be equal to something else. In fact, if there exists no equality between goals, all the legislation and public policy, and guiding science will not change that fact. 2+2 will never equal 5.
25. Continued polarized views and some stakeholders signaling they are leaving the discussion table.
26. Twin tunnels.
27. Inability to work together openly and honestly without negative maneuvering behind the scenes.
28. Taking to much water from the Delta.
29. Conflicting needs and complex problem.
30. Lack of community education and money at stake from developers.
31. The State not offering alternative means of supplying water. There are better options but they are not being proposed. This is the Governor's pet project and he has blinders on and isn't considering or proposing options.
32. Everything I have already said.
33. Special Interests in southern California
34. The goals are not being approached from the proper perspective. The health of the Delta depends upon fresh water flows. You can't take half the flow of fresh water and separate it from the estuary and expect the estuary to survive.
35. The farmers in the Delta are being treated like they are just dots on the map for land to grab and transfer wealth to Kern County billionaire farmers like Stewart and Linda Resnick. We all know, behind the scenes, the big money guys like Richard C. Blum and others are salivating at all the money they will make on construction for 10 years. Blocking off Scenic Highway 160 and greatly impeding traffic flows on Highways 12 and 4 for ten years will completely ruin Delta towns from Freeport to Walnut Grove, who rely on the tourists and boaters. And sucking 9,000 CFS out of the Sacramento River may endanger boaters from even using that river, which will cripple recreational boat traffic on that key river. Plowing this project right through the middle of the Delta will be a frickin' nighmare to all recreational boaters, who like to anchor out on places like Mildred Island and other serene waterways. When they see 300' long docks constructed for boat barges and big highway type night lights, they will never return to the Delta, but, of course, that's what all you big bureaucrats stealing the water want anyhow, right?
36. Major Barrier: It's impossible, PERIOD. You can't squeeze more water out of Northern California streams than there is available. XXXX acre feet to make the Delta work and XXXX acre feet to supply SoCal equals 50% more than there is available ----what is there not to understand??? California needs MORE water !!! Desalinization offers the only solution.
37. Local Delta interests (farmers, counties, water agencies) that are intent on protecting their own interests without regard to the greater interests of all the citizens of California.
38. Too many clients, too little water. Politicization of water allocation. Selling out the voters and residents in favor of large agricultural interests and urban water districts.
39. Big money lobbies. A fixed mind set on tunnels. A massive civil engineering project -- government and labor both love these. Look at the "new" Eastern span of the Bay Bridge? Get the Brown brothers involved!
40. Lack of Urgency. Lack of Cooperation.
41. The complexity of the issues and perhaps focusing on a solution without embracing the full complexity of the problem is the greatest barrier: agricultural land use - protecting best soils with good climate versus

watering the desert for orchards; urban land use (see previous remarks). A watershed approach would identify strategies that protect the functions of the watershed for water supply benefits and flood management combined with Ag land stewardship with effective land use controls and urban strategies, as discussed, that results in smaller physical facilities that have lower impacts, maintenance and operation costs for a sustainable solution.

42. There is a need and serious concern over water quality equity for all concerned. This is a general statement, but reflects on the inability of the current agencies to police water control during drought periods, conservation of water, storage and most important the creation of more water at the right time, right location, at the right cost, without destroying one area to advance another. The current vision is myopic and at best, a short-term fix. If left to the bureaucrats, the San Joaquin River and Sacramento Rivers will flow with brackish water and the Tunnel system will attempt to deliver mountain water, until it can no longer do so near Sacramento. The communities that live and work along the Delta will no longer be able to use the Delta water for drinking. De-Sal plants will be the next project on the horizon (that were deemed too expensive in Southern California will be the norm for the entire State. So, maybe the vision should be to get ahead of the curve by placing De-Sal plants in the communities, closest to saltwater (creating new sources of water) and rely on the Delta to supply fresh water during non-drought years. This can be done by maintaining the levees in the Delta and holding the saltwater at bay (SF Bay), as best we can.
43. Cost to build The two tunnels, the environment problems caused by over water exports. The pollution that is imported from Kern County.
44. Seems like the direction has been set and the outcome has been defined. The "Two Equal Goals" seems to be a marketing scheme to mask the true intent which is to build TWO NEW TUNNELS!
45. The state has largely conceded control of BDCP to export agencies that are trying to increase exports despite clear scientific evidence that total diversions must be reduced.
46. Goals are not co-equal because taking water south and trying to balance that by offering an improved Delta ecology are two incompatible concepts
47. Governor, Feds
48. The primary interest needs to be the sustainability of water quality and fisheries. The business and agriculture interests are stampeding us into a bad plan.
49. The fact that there is virtually no representation from affected Delta counties and organizations during any of the planning or discussion of this project is a disgrace.
50. Water for Sothern Cal vs protecting the Delta smelt.
51. The west side water district.
52. Singleminded purpose from state and to some extent federal government. Really need to stop trying to ram project through without alternative information.
53. There really is only one goal water to southern California at any cost or should I say water to the utility company to resell at a profit at any costs, this is really obvious to an outside looking in.
54. The environmentalists could care less if the state goes bankrupt and the farmers go out of business. They only care about shad. The farmers and those who enjoy recreation in the Deltas will never agree that shad are more important than farming and recreation.
55. Monied interests in the Central Valley and Southern California.

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56. A few influential corporate agribusinesses and LA developers are pushing a destructive plan for private profit.
57. An underlying feeling, not often baldly expressed although occasionally be Jerry Meral and others, among many export water contractors and project purveyors that the Delta is doomed and not worth saving.
58. Jerry Meral
59. The goals are in conflict and corruption dominates.
60. The co-equal goals are mutually exclusive as long as "reliable" means anything other than "less."
61. Greed
62. The Delta is being left as a wasteland - there will be NO fresh water to flush out and maintain the system
63. San Joaquin Valley agribusiness money.
64. Political grandstanding for special interests of local politician.
65. Framing the project and solutions before the modeling was done. Not fully understanding the impacts of climate change, or the environmental constraints on increasing diversions from the Sacramento River.
66. No. There are NOT Two Co-Equal goals. The only goal is to supply endless amounts of water out of OUR DELTA.
67. Greed on the part of water contractors.
68. There is no clear direction to meet the co-equal goals, and the other goals established in the SBx7 legislation by the Governor and his appointees. There is a systematic failure to clearly articulate the goals and objectives of this legislation, and no substantive attempt to work out solutions. Fundamentally, the co-equal goals are being used as a fig leaf for a water grab, and a power play by a few individuals.
69. Blatantly false propaganda published by the media.
70. The fact that the Delta people have been ignored in the process.
71. The Delta Tunnels....FUNDING and CONSTRUCTION.
72. Continued effort to extract more water from the Delta. Ignoring science, ignoring the decline of the ecosystem and how it parallels with the increased exports of water. You cannot save an ecosystem by taking away its habitat, in the case of the Delta, habitat is water.
73. Those protecting the status quo over solutions they may disagree with. We need to move forward with a viable plan for meeting the coequal goals and time is of the essence. Obstructing progress is harmful to all.
74. Mother Nature has processes that play a major role "deltas." One earthquake, one extreme tidal event, an animal burrow uncorrected and things change dramatically. Peat is not building, it is blowing away.
75. A major barrier is the lack of clarity in the evolving BDCP plan.
76. Bay area/ Delta unwillingness to compromise for long term development needs of the Central Valley and Southern California.
77. They are mutually exclusive. I'd like to know which person thought these up.
78. The failure to properly account for the effects of climate change... which is coming faster and with greater effects than were forecast at the time the assumption of these plans were made.
79. Proposals that increase water exports out of the Delta; increasing water exports in exchange for tidal marsh and floodplain habitat restoration.

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80. Failure to provide adequate water supply for fish restoration.
81. Fish, as they are still dying.
82. Exporters and their expectations. Politics as a means to erode the property and water rights of Delta farmers. Politics as a means to control development. Clearly, it's about money; the Delta is just another water source.
83. You will never achieve the co-equal goals by diverting the Sacramento River around the Delta. If you want a more reliable water supply you need to go to regional self-sufficiency. The California Aqueduct is built on the San Andreas fault. Removing more water from the system will destroy it.
84. Politics and inability (for various reasons) to get ecosystem restoration projects implemented so more can be learned about the improvements to ecosystem function that are possible.
85. Total lack of trust that the process is actually not preordained to select one "solution."
86. Adversarial politics and misrepresentation of data, particularly by Water users and Counties. Insufficient support for water conservation in ag and urban user communities. Lack of funds for water infrastructure and restoration. Lack of efficient mechanism for acquiring property to restore.
87. Self-interest environmental organizations trying to build membership and get donations.

Recommendations

What recommendations do you have for improving the State's progress and action on the Two Co-Equal Goals?

1. Kill it! Listen to Dr. Robert Pike and Restore the Delta people more. Spend less to beef up the levies and build more reservoirs to store the water in wet years and for flood control.
2. Remove water as a money-making commodity available to the highest bidder. Water needs to be assessed on a more serious level than clever political spin.
3. Eliminate them forever. They are a HOAX!!
4. Define minimum flow standards for the Delta and Bay Estuary. Genuinely include local Delta interests in all aspects of the governance and decision-making arenas, not just lip-service; and finally, enforce Junior water rights in WWD as well as area of origin protections guaranteed in the California Constitution. THEN, we might be able to have better discussions and strategies in resolving California's TRUE water issues, not these manufactured delivery issues Westlands Water District has. However, since they fund most of this garbage, I'm sure my suggestions will end up in the 'Round File'.
5. Not enough water, not enough storage capacity, historical perception that users "own" the water, overdraft of groundwater resources. There would seem to be a need to better manage water use and measure water use transparently. Recognizing the perceived intangible benefits of flowing water passing through the ecosystems.
6. A leader needs to step up to the plate, either Governor Brown or Senator Feinstein. Business and labor concerns need to also speak with one voice.
7. Authorize/appropriate state and federal funding to continue planning for a viable sustainable Delta solution. Immediately convene a blue ribbon engineering/fisheries panel to develop potential alternatives based on the original (but ignored) principles of taking more water in wet periods and less in drier periods (i.e., new storage to capture water), and reducing reliance on Delta water (i.e., incorporating a portfolio of water use efficiency measures and local supply actions into the proposed solution). Replace the current

Natural Resources Agency leadership of the BDCP process and bring in competent and responsive managers with experience in actual competing Delta projects. DWR's record for developing and implementing Delta projects is abysmal so DWR's role (despite their SWP responsibilities) will unfortunately need to be minimized. Basically, the whole process needs to be rebooted ... by establishing or affirming a set of principles and seeking solutions that actually meet those principles. Arrogantly assuming political and economic power trumps the need to meet those principles, comply with water rights law and be guided by science is what got us into this mess and has wasted a golden opportunity to "fix" the Delta once and for all.

8. Keep pushing forward and don't succumb to the loud voices of negativity.
9. Council will have to use bully pulpit and implementation committee effectively - a very hard task when the one tool could point to conflict and the other expects a willingness to resolve differences. Develop long-term sustainable funding for major projects and grants that doesn't rely on GO bonds.
10. We need to have a definition of just what co-equal real means - not likely this will happen!
11. Make real commitments on articulated benefits. Focus on the folks in the Delta and Bay Area who can be moved - those who recognize the benefits of this project for their area and our state.
12. Need much stronger effort to control striped bass population in the Delta which, as I understand it, is the single biggest problem for salmon and other native species. So let the fishermen really attack the striped bass (non-native) population to get the species in better balance. This would benefit the environmental goals and, consequently, the water diverters may have more water "availability
13. Expand the goals to include social justice and equity, regional and local economics, and employment. The regulatory goals are a disaster. Regulation never should have been an implicit goal. Covered actions are another time consuming, expensive layer of regulation governance in the Delta. The regulatory goal should have been streamlining and reduction of regulatory compliance.
14. Tell everybody that in a world of 9 billion people and less oil, we will all have to make sacrifices. Realize that market based ideas like the Carbon credits are not going to help. Markets work fine when resources (read: High EROEI fossil fuel energy) are abundant. When, scarce the potential for corruption and bullying increase. Pains must be taken to keep the plan and its implementation above suspicion. Being honest about sacrifices is the first step. I know this conflicts with the assumption of facilitated processes that 'everybody wins'. But what if everybody also has to lose? There are far too many demands being put on the earth, here and elsewhere. Just try to convince everybody working for a resource concern in sac that the best choice they can make for their grandchildren's future is to decide to ride the bike to work today, or work part time to reduce the energy invested in their just showing up for another meeting! So I recommend that the plan focus on reducing the number and intensity of demands on the Delta. Management, new infrastructure and existing demands should follow the reduced demand guidelines. Otherwise, cut 'em off from state restoration $ support like you have been planning to do with the CDEW. I suspect this was the plan all along but it is not clear in the DVP about the specifics. Uncertainty scares people. Best to be very clear about just how bad its going to be.
15. I'd first think about the actual influential stakeholders and objectives, then I'd reformat the "co-equal" goals in a way that could highlight the value and importance of the Delta. Of all the agencies out there capable of doing this, I really believe the DSC *can* and *should*. Thus far, the DSC has shown significant leadership and growth, while also vetting out some of the challenges based on the current system of have/have-nots. Time is the real enemy and the entire process should be extended so that expectations can match and emotions cool down.

16. 1) Change the leadership of the DSC and clarify its role in clear English (not legal jargon). 2) Support the effort that has been of the highest quality and encompasses all the components for the co-equal goals based upon the best science available, the Bay Delta Conservation Plan.
17. While 2009 Legislation did improve governance, still need to address fragmentation. Legislation to "guarantee" that flow standards will be met no matter which conveyance options are chosen would be very helpful.
18. Reduce expectations about future agricultural water use.
19. Somehow power must be transferred to an entity that has responsibility, adequate funding, and accountability for responding to all the stakeholder interests. So far there has been the failed idea that agencies can get together and cooperate. They can't. They fall back into only looking after their own goals and turf.
20. Allocate additional funding to close data gaps, better define what a restored delta ecosystem is, and modify water rights.
21. Join the 21st century and stop attempting to derive reliable water from the Delta. Find reliable water elsewhere, and fix what has been broken without needing to export water for other uses.
22. Governor issue an executive order to proceed with the preferred alternative as an emergency measure in the interest of the entire state's economy.
23. Stop twin tunnels. Desalination.
24. Consider more storage for spring runoff to eliminate the twin tunnels.
25. One Board or Commission with Stakeholders and authority.
26. Realize the Delta is a vital resource that needs maintenance and preservation. Stop entertaining ideas that will lead to elimination or reduction in the vitality of the Delta, it's communities, and/or economy.
27. Look at other options and stop playing politics!
28. Do a true Benefit-Cost of the alternatives. Let the locals help you. Stop the Top Down approach and seek a solution that truly achieves the Co-Equal Goals, while preserving the economic, historic, and truly special place that the Delta is.
29. Find a way that works before starting a project, the ecological system is paramount and few are paying attention to that.
30. First: determine what the total real inflow of fresh water is now coming into the Delta. Determine how much must remain in the Delta for fisheries, habitat and in-Delta needs. Only then should any amount of exports be calculated. Contracts and permits for export of water from the Delta should be scaled back to reflect the reality of the inflow and in-Delta needs.
31. STOP THE CANAL PROJECT!!!!
32. FORGET IT----IT IS AN IMPOSSIBLE GOAL TO REACH There just is not enough guaranteed available water to accomplish the task. It is like trying to hit a moving target with stationary computations. Only Desalinization is the answer to California's needs in the future. Be a FUTURIST for just a moment and realize that the tunnels might have worked 30 or 40 years ago, but that time and population has passed. Northern California cannot send SoCal a guaranteed amount of water that it does not have all the time.
33. Stop trying to achieve perfection on the plan and move forward more quickly.
34. Scrap the Tunnels Project. Involve water policy research professionals at UC Davis, UC Berkeley and elsewhere to really do a full cost-benefit analysis that includes water reliability, salinity with influx from the

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SF Bay, the impact of the siphoning of the Sacramento on the SF Bay itself. Consider other catch-basin and desalinization projects before a decades-long project that will irreversibly damage the ground water, the soil, and the ecosystem.

35. Do some research into water desalinization! And implement it!
36. Agree on the governance structure. Hire or assign a champion as the initial Implementation Organization Program Manger to start up and/or plan CM1-22 for the two programs. Start looking immediately for the Implementation Organization Program Manager who will be responsible for execution of CM1.
37. Focus on big picture as discussed above to help Californians under connecting the dots of growth, land use - urban and agriculture - and cost effective strategies instead of isolated problem solving.
38. Desalinize L.A.
39. Step back, look at alternatives, remove lobbyist from decision making positions and on sitting on the various boards, do a cost analyses and THEN make a decision.
40. Seriously pursue the portfolio alternative and the DV Foundation's recommendations. Modify BDCP proposed operations and State Board flow standards to reflect the best available science.
41. Stop the two tunnels and start conservation via improved farming and tax or rebate incentives to encourage residents and businesses to switch to drip watering, low water toilets, etc., and start a real desalinization financial plan to guarantee adequate water supply.
42. Give more weight to the sustainability of the Delta.
43. I believe we need to start over again from scratch and see what can be done without these tunnels. The wasteful crops and farming practices in the central valley have been totally ignored in any discussion, probably because of the monetary contributions they have provided to ramrod this project through.
44. Stop development in the Delta.
45. Slow the pumping to achieve adequate out flow from the Golden Gate.
46. See above.
47. Take it out of the hands of the state and put in federal hands to help decide.
48. Get the message that was already voted in many years ago.....NO peripheral canal - NO transfer of Delta water to people who own water rights and can sell them to ANYONE. It is all about money to those who own the water rights. WAKE UP and do what is right for the state and the Deltas and the farmers who make their livings here.
49. Try and get the Governor... once someone who cared about Northern California's ecosystem ... and the Legislature to see it as in their best interests to end the wasteful expenditure that the Tunnels represent.
50. Stop current BDCP efforts. Evaluate the value of almonds and cotton grown in a desert for the states GDP versus the commercial salmon industry, northern farmers, the rights of Delta communities, their home values. Realize if there is a major earthquake, e.g. On the San Andreas, the safest system would be regional self-sufficiency and begin now with an increased conservation plan and building desal in LA and even piping over to the central valley. Reduce reliance on the Delta with a plan to get back to 1990 export levels which means reducing the almond acreage and cotton. Perhaps respire some of the Tulare Lake Basin to recharge ground water storage for the central value and improve habitat. Restore Delta habitat but not at the expense of family farmers. No tunnel construction.
51. State Water Board adjudicate stream system water rights prior to new construction. Analyze and effectuate importance of Delta Protection Act and county and area of origin statutes.

52. Scrap this plan and spend the money on individual water districts implementing their own water. Spend on water conservation and recycling.
53. Drop them and set a new goal: how does California obtain more quality water overall in the future.
54. Forget about ANY new conveyance in the Delta. Focus on improving levees for through-Delta conveyance and on developing local and regional water self-sufficiency throughout the state.
55. Sell water for the cost of delivering it.
56. Don't build the tunnels. Find other sources of water. Or build more dams to store water....
57. Find someone to lead it who is willing to forego higher office and would be satisfied with doing one very, very important thing correctly.
58. Let the engineers run the process with goals and outcomes clearly written down and a non-obstruct clause so things can move on.
59. Face reality. California may be at peak water. If we don't make the hard choices now, we could have far worse problems down the road.
60. Read and abide by the CENTRAL VALLEY PROJECT AND THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT. (CVPIA)
61. Be honest.
62. The Legislature needs to review the status of the progress to date and re-visit the legislation to ensure that it is on a beneficial track.
63. The Governor needs to keep up his good work.
64. Stop the Canal and Stop wasting money.
65. Reduce size and scope of the project. Redesign State project to meet the two co-equal Goals by providing the leadership and direction with increased Storage and better control.
66. Stop relying on the Delta to quench the thirst and greed of So. CA and corporate Ag.
67. More good science and engineering that is working with the natural processes.
68. BDCP should be recast as a statewide solution, rebranded entirely, and some real changes to the proposed plan, i.e. larger tunnels and more upstream/downstream storage should be part of the program, even if it means more money. Get this done right.
69. End the move for construction of Delta tunnels and concentrate solely on saving the Delta. Do not take any more water from the Delta. The charts show that the DWR doubled the water diverted to the MWD from 2000 to 2006 because they were quietly making up for the loss of Colorado River water. This is what killed the Delta and it took a Federal Judge to stop it. Diversion were then limited and the salmon fisheries were revived. That's all you have to know!
70. One way to start is to ask the basic question of how to protect the Delta and our water supplies from the impacts of climate change: less water, less predictability of supply, sea level rise, massive drain on financial resources to deal with the above.. Without that clear answer, it has all be a gigantic waste of time and resources.
71. Identify necessary increases in the amount of freshwater flow that moves through the Delta to protect migratory and native fishes first. Then size potential infrastructure investments appropriately.
72. Reduce water exports.
73. Follow the National Science Foundation's recommendations.

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74. Abandon the idea of diverting the Sacramento River around the Delta, improve existing levees, determine how much water needs to flow through the system to maintain the fish and farms, export the rest.
75. Scrap it. Start over with an elected statewide body specific to this issue that conducts every moment in the open via the Internet.
76. Approval of the Delta Plan, BDCP, and the 2014 Water Bond. Improved education of the public on the issues.
77. Codify it in the law.