STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., Governor

DEPARTMENT OF WATER RESOURCES
DIVISION OF ENVIRONMENTAL SERVICES
3500 INDUSTRIAL BOULEVARD
WEST SACRAMENTO, CA 95691

August 22, 2011

Mr. Chad Dibble
Department of Fish and Game
830 S. Street
Sacramento, California 95811

RE: Comments on the July 2011 draft of the Ecosystem Restoration Program (ERP) Conservation Strategy

Dear Mr. Dibble:

Department of Water Resources staff has reviewed the ERP Conservation Strategy July 2011 Draft. Attached are our comments and questions. The attached table first lists general comments and is followed by line-specific comments and questions.

We suggest that sections addressing the relationship of the ERP conservation strategy to other planning efforts be further developed for this document. For example, the ERP strategy component related to the Yolo Bypass hydrologic regime is not consistent with planning efforts for the Bay Delta Conservation Plan or the 2009 Operations Criteria and Plan National Marine Fisheries Service Biological Opinion. Also, it is unclear how the ERP strategy might be coordinated with the Central Valley Flood Protection Plan and its associated conservation strategy.

Thank you for the opportunity to review and comment on the ERP Conservation Strategy July 2011 Draft. If you have any questions or concerns, please contact Marcus Yee of my staff at myee@water.ca.gov or (916) 376-9744.

Sincerely,

for Dale K. Hoffman-Floerke
Deputy Director

Attachment

cc: (see attached list)

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Ecosystem Restoration Program
Review Document Comment Form

Document: **CONSERVATION STRATEGY FOR RESTORATION OF THE SACRAMENTO-SAN JOAQUIN DELTA ECOLOGICAL MANAGEMENT ZONE AND THE SACRAMENTO AND SAN JOAQUIN VALLEY REGIONS**

Page #	Section #	Paragraph #	Comment
58	1.III.	Paragraph 3	Non-Native Centrarchids, in particular largemouth bass, are listed here as non-native invasive species, however, they continue to be managed as sport fish with restrictive bag and size limits. If DFG considers them invasive, why does DFG continue to sustain their populations through fishing regulations?
58	1.III	Paragraph 1	Why is striped bass not addressed in the invasive species section? Striped bass are a prolific predator in the Delta and have been shown to consume native fish species and other native fauna. There is no subsection detailing the possible predation effects by striped bass nor are there any discussions of previous studies, ongoing work, or proposed studies. Perhaps sportfishing regulations protecting striped bass should be examined and/or eliminated.
203	#3-VI:	Floodplain Reconnect and Funct. Riparian Corridors	ERP recommends that DWR's FloodSafe Program be leveraged for the restoration of riparian corridors and reestablishment of floodplains.
55	1.III.	stage 2 actions for water diversions, action 4	If the primary management mechanism used in the biological opinion is to keep smelt out of projects/south delta to begin with, why spend time and money monitoring pre-screen losses of delta smelt? Shouldn't focus instead be placed on improving our ability to keep them out of the southern delta and/or our ability to monitor for them as they become at risk for entrainment into the southern delta?
94	1.VII.	Water Diversions, action 4	Same as for Section 1.III.
59	#1-III: Asian Clam	Paragraph 2	ERP states that Asian clam is among the highest management concerns in the Delta, and that 'the only apparent management action at this time… the manipulation …of salinity'. If implemented, this would require DWR to allow X2 to move further east into the Delta.
98	#2-I: Central Valley Streamflow	Paragraph 1	ERP suggests that Sacramento River stream flows should be altered with significant short-term releases that emulate natural peak flow events. These could affect DWR's water operations.
174	#3-III: Water Temp.	Paragraph 3	ERP promotes water release management from New Melones, Dan Pedro, and Lake McClure to maintain cooler water temperatures in the fall and spring. This could affect DWR's water operations.
91	#1-VI: Lower San Joaquin R.	Paragraph 6	ERP suggests that creation of floodplain, riparian, subtidal and tidal habitats in the south Delta to become a priority *after*—not prior to—completion of the peripheral channel. Restoration should be at least concurrent to peripheral channel development or would risk compounding negative environmental affects due slow beneficial realization from restoration efforts .
153	#2-VII: Dams and other	Dams and other Structures	The ERP fails to include an Action to facilitate passage of salmonids and sturgeons through Yolo Bypass.

Page #	Section #	Paragraph #	Comment
	Structures		
263	Appendix B Goal 4	Objective 5	ERP supports DWR's efforts to manage Yolo and Sutter Bypasses as shallow water habitat but does not include support for fish passage improvement efforts on these floodplains.
43-44	#1-II: Delta Floodplain	Last/first (bullet)	ERP Cautions that for floodplains 'Deep drainage canals or… scour holes deeper than a couple of feet should be removed'. Both Sutter and Yolo Bypass have these features. This would require DWR to frequently contour the floodplains. Elimination of scour holes could negatively affect terrestrial, avian fauna, and farming interests.
42	1.II	Paragraph 2	The prescription for Yolo bypass floodplain inundation regarding timing, frequency, and duration is not consistent with planning efforts for BDCP or OCAP BO implementation. Sustained inundation via increased reservoir releases as late as June (if large storm events/snow melt were to cause flooding in May) could be costly in water supplies, would likely be strongly opposed by existing agricultural interests within the bypass, and would likely benefit fewer target native species given how late in the season the inundation would occur. Existing planning efforts for this measure are targeting a smaller period (likely through April or May at the latest).
42	#1-II: Delta Floodplain	Paragraph 2	ERP states: 'DFG recommends… once 10 days of floodplain inundation have been achieved … between January 1 and May 30, then reservoir discharges should be continued to maintain uninterrupted inundation for at least 30 days in the Yolo Bypass and …' This would have serious consequences to DWR's water operations, would undermine natural complexities, and would undermine the above (#3) or the start of the paragraph by being beneficial to exotic species. This scenario could happen multiple times in a year and would weaken levees, increase flood risk, diminish availability of water for human usage, and negatively impact farming.
42	#1-II: Delta Floodplain	Paragraph 2	ERP infers that complete floodplain drainage by the end of flooding season is needed to favor natives over non-natives is contrary to late season flooding and summer export flows in the Yolo Bypass Restoration Plan.
8-9	Intro, Purpose and Intended Use		The Central Valley Flood Protection Plan and associated Conservation Strategy are major State planning efforts being undertaken within the Central Valley that will have significant impacts on the river systems throughout region. These efforts also provide significant opportunity to restore physical riverine process and associated ecosystems and habitats/native species populations. The ERP study area and the CVFPP study area significantly overlap. How does the ERP Conservation Strategy interact with the various entities of the CVFPP and associated Conservation Strategy?
40	#1-II: Delta Upland	Box; Action 5	States restoration of large-scale riparian wherever feasible, could support DWR's efforts to maintain riparian vegetation on levees, but could be problematic if applied to floodplains.
141	2.V.	Sacramento River Bank Protection Program	SRBPP revetment projects have significant effects on the extent of remaining riverine process along the Sacramento River. These physical processes are responsible for the development of critical habitats (riparian veg communities, floodplain reworking, sediment movement, cut banks) for listed and protected species (bank swallow, yellow-billed cuckoo, salmonids, etc). This program's activities are in direct contrast to the goals of this conservation strategy. It is not clear how this Conservation Strategy will interact with this program. Can this be used as an opportunity to address the cases where revetment is unnecessary and alternatives could be utilized or rock could be removed?
91	#1-VI: Upper Sherman Is.	Paragraph 3	ERP suggests the pursuit of flooding DWR's Sherman Island to create deepwater habitat for native pelagic species.
115	#2-III: Dams and other Structures	Paragraph 1, box	ERP stated actions include Action 2: Install salmon exclusion device at Knights Landing outfall will affect DWR restoration actions for the Yolo Bypass; Action 4: modify Yuba River Dam to allow juvenile salmonid passage would involve DWR.

Page #	Section #	Paragraph #	Comment
145	#2-VI: Fish Passage	Paragraph 3	ERP promotes improving fish passage on single-species specific efforts. This narrow approach is not 'Best Available Knowledge' and would minimize multispecies gains, and limit access of all impacted species to maximum beneficial habitat areas. It needs to be stated that fish passage will be provided for all present native species.
152	#2-VII: Riparian and Riverine Aquatic Habitat	Action 3	ERP promotes the removal of small dams on gravel-rich streams, which could affect some of DWR's restoration focus on the east side of the Delta and in the upper Sacramento Valley. This could also reduce channel capacities downstream of the removals. Additional action would be needed.
153	#2-VII: Water Diversions	Action 4	ERP suggests additional water diversion screening projects are needed on the Sacramento River. Screening projects need to be evaluated individually because benefit/cost is highly variable.
179	#3-III: Selenium	Paragraph 2	ERP recommendations to increase San Joaquin River Basin outflows could increase the selenium load on the Delta, especially in low flow periods, thus neutralizing some of the restoration gains made by DWR.
104	#2-I: Floodplains and Flood Processes	Paragraph 2, box	ERP's Stage 2 Actions for Natural Floodplain and Flood Processes has direct bearing on DWR's restoration efforts. "Action 1: Restore 50- 100 miles of tidal channels in the Yolo Bypass that connect to the Delta" would require the construction of new channels because there are not that many miles of channel available for restoration. The ERP also state here 'The actions necessary … require major land purchases or easements, and financial incentives to move existing floodplain user elsewhere…'
94	#1-VII: Floodplains	Paragraph 1, Actions	ERP in Action 1 suggests continued coordination with Yolo Basin Foundation and other local groups in DWR's efforts to improve habitat and fish passage. Action 3 suggests that land and easement purchases should continue for floodplains.
109	#2-II: Riparian and Riverine Aquatic	Paragraph 1, box	ERP actions for habitat development state Action 1: acquire title or easements for river meanders; Action 2: purchase streambank conservation easements; and Action 4: identify levee banks where vegetation removal can be discontinued.
206	#3-VII: Natural Floodplain and Flood Processes	Action 3	ERP suggests pursing reconnecting historic floodplains with minimal private property impacts. These are mutually exclusive. To achieve any practical values the State will have to purchase property or easements.
60-61	#1-III: Non-native Invasive Plants	Paragraph 1-3	ERP states that restoration projects must be designed and managed to reduce non-native plant cover and states that periodic salinity intrusions into the Delta may be needed. This will add an element to shallow water restoration planning and will require DWR to periodically change water operations.
161	#3-I: Ecological Fair Share Contribute	Paragraph 1	ERP advocates increasing the spring time releases on the Tuolumne River. This may affect DWR's water management in other areas and could strain existing levees; however, such releases should be beneficial and help offset ecological damages done by flood control and water delivery projects.
57	#1-III: Non-Native Invasive Sp	Paragraph 1	ERP states the SWRCB listed the Delta, upper San Joaquin River and Cosumnes River on its 303(d) list as impaired due to exotic species and expects it to formulate a TMDL program in the next 10 years. This will add an additional burden to DWR projects, minimization of exotic impacts.

Page #	Section #	Paragraph #	Comment
76-78	1.IV.	all	Black Rail and Swainson's Hawk are the only two terrestrial wildlife species listed here. A more thorough discussion of other special status species listed in the "other at-risk species" section and more (Least Bell's Vireo, Yellow-breasted Chat, listed fairy shrimp species, etc.) would be useful in this document, as they have all been documented in the region and should be targeted for restoration actions.
77-78	1.IV.	Swainson's Hawk	The discussion of Swainson's Hawk covers a lot of information about their historical distribution and genetic diversity, but a more thorough discussion of how ERP intends on contributing to the species' recovery would be useful.
340-341	Appendix F		Red-legged frog is missing from this list. It is listed in at least one of these HCPs and should be included.
10	Intro, Eco Setting	Paragraph 4	ERP Intro states that this vision necessitates levee setbacks to enhance natural river processes, but the rest of the document doesn't go on to identify this issue and potential locations in the Sacramento Valley. This would create increased capacity in the system and reduce the risks of unintended flooding, and would provide wide ranging ecological benefits and buffering. Areas of greatest gain for setback should be identified. Breach sites should be established as pressure release valves to protect cities.
54	1.III.	Paragraph 3	In regards to stress and mortality from handling and trucking, newer information than the references listed, including published and unpublished reports by DFG, DWR, and USBR, suggest that losses due to handling and trucking are relatively low (even for Delta Smelt). Cite Raquel (1989) and include in the References section this entry: Raquel, Paul. 1989. Effects of handling and trucking on Chinook salmon, striped bass, American shad, steelhead trout, threadfin shad, and white catfish salvaged at the John E. Skinner Delta Fish Protective Facility. Technical Report 19. Interagency Ecological Study Program for the Sacramento-San Joaquin Estuary. FF/BIO-4ATR/89-19. 16 pages with attachments.
54	1.III.	Paragraph 4	The fact that pre-screen losses are greater than salvage losses is nothing new. The usefulness of the salvage facilities is greatly hampered by predation losses to non-native predators. Again these losses should be included under non-native invasive species.
54	1.III.	paragraph 3	In regards to Clifton Court Forebay and the salvage facilities, this section is about water diversions and barriers (i.e. entrainment losses). While losses after the radial gates have traditionally been termed entrainment losses, the actual causal mechanism (aside from inefficiencies in salvage effectiveness) is predation losses to non-native fishes, namely striped bass. These losses (and striped bass) should be included in the discussion of non-native invasive species.
54	1.III.	Paragraph 3	Predation effects are high near the export facilities, but may be no different than predation effects in the Delta. "Background" predation levels in the Delta have yet to be determined.
55	1.III.	Paragraph 2	The primary source of loss at the projects is to predation morality. This is clearly stated, yet it is referred to as direct anthropogenic mortality. There are anthropogenic losses not entirely from the projects, but from the introduction of non-native predatory fish (striped bass). Anthropogenic mortality would include inefficiencies of the salvage facilities or the act of striped bass introduction.
55	1.III.	Paragraph 3	Two items (increased winter pumping and POD) can co-occur and not be related. Suggesting that they are related with no scientific proof is not prudent.

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74	1.IV.	Paragraph 6	Recent VAMP data has shown that salmon survival is nearly equal for salmon that enter Old River (channel off the San Joaquin River). Suggest review of recent VAMP reports (2009/2010).
74	#1-IV: Chinook salmon	Paragraph 5, bullets	ERP states that telemetry has found that migrating juvenile salmonids utilize the middle portion of channels. This would indicate that there is a reduced risk of entrainment at smaller shore side diversions and that DWR's efforts to divert juvenile salmonids onto floodplains will have limited success.
77	1.IV.	Paragraph 1	States here that little is known about habitat associations of Black Rails in the Delta. DWR staff surveyed for Black Rails in the Delta and detected birds on many instream islands with mixed willow/dogwood and tule vegetation. Occurrences were submitted to the Biogeographic Data Branch for inclusion in the CNDDB and are currently in the back log. There is also an established Black Rail population in the Sierra Foothills outside of Marysville that should be mentioned in this section (see http://nature.berkeley.edu/~beis/rail/Richmond_et_al._2008_JFO.pdf)
78	1.IV. SWHA	Paragraph 2	Other studies have shown that Central Valley populations of SWHA do not necessarily segregate in terms of winter locations (Sarasola and others 2008). The current understanding of SWHA is not well represented in this section. Other studies should be taken in to account. Sarasola, J.H., J.J. Negro, K.A. Hobson, G.R. Bortolotti, and K.L. Bildstein. 2008. Can a 'wintering area effect' explain population status of Swainson's hawks? A stable isotope approach. Diversity and Distributions. Pp1-6
78	1.IV. Other at Risk Spp.	Other At-Risk Species	Is it possible to cite the studies referenced for frogs and multiple landbird species discussed here in the bulleted section?
79	1.IV. Other at Risk Spp.	Paragraph 1	This first paragraph seems out of place. Section is introduced as: here are findings related to at-risk spp. This paragraph talks about tools and proposals that managers might use.
91	1.VI.	Upper Sherman Island	Not all of Sherman Island is owned by the State of California. In addition, similar nearby flooded islands (Franks Tract, parts of Decker Island) have become heavily impacted by invasive species (SAV and non-native Centrarchids) so I'm not sure how beneficial this new "open-water" habitat would be. The effects of flooding Sherman Island on salinity intrusion and increased fish entrainment into the southern delta will also need to be seriously considered.
91	1.VI.	Upper Sherman Island	Sherman Island is not entirely owned by the State of California. Other flooded island projects have had mixed results due to invasive species. Open water habitat would likely create opportunities for more submerged aquatic vegetation to establish which is not congruent to establishing native fauna populations.
111	2.II.	Paragraph 2	More specific information on the restoration for Bank Swallow habitat would be useful. For example, how was the target of 5,000 burrows reached, and how does it ensure "species recovery"? Is this a target for a total burrow count along the entire watershed, or does this paragraph mean that adding an additional 5,000 burrows is the target? The Bank Swallow population along the Sacramento and Feather River watersheds is in decline, so a more specific discussion of how ERP plans to contribute to their recovery is very important.
111	2.II. Riparian and Riverine Aquatic	3rd paragraph	Paragraph states that conservation activities and planning have potentially provided habitat for target numbers of nesting BANS. It should be noted that activities of the SRBPP include placing revetment in this reach, which potentially affects river process throughout this reach. The efficacy

Page #	Section #	Paragraph #	Comment
			of such restoration/conservation efforts depends on the maintenance of these processes combined with the preservation of natural banks.
114	2.III.	Paragraph 1	Are there any studies that addressed the impacts of revetment for flood control?
127	2.IV.	General	A general note for all species accounts: It would be useful to have some discussion about how the research summarized in this document ties in to ERP goals and is informing future restoration and management actions. As it reads right now, it is difficult to see the direct connection to the "conservation strategy for restoration."
132	2.IV. Neotropical Migratory Birds	2nd sentence in the 1st paragraph	Is it possible to acknowledge that there is a rich body of literature addressing response of Neotropical and other landbirds to restoration that has been funded with CalFed dollars? Please see the following subset of the consolidated information regarding restoration and landbirds in California funded by CalFed: • Seavy, N.E., C.A. Howell. 2010. How can we improve information delivery to support conservation and restoration decisions? Biodivers Conserv. 19:1261-1267. • Seavy, N.E., T. Gardali, and others. 2009. Why climate change makes riparian restoration more important than ever: Recommendations for practice and research. Ecological Restoration.27:330-338 • Seavy, N.E., J.H. Viers, J. Wood. 2009. Riparian bird response to vegetation structure: A multiscale analysis using LiDAR measurements of canopy height. Ecological Applications. 19:1848-1857. • Golet, G.H., T. Gardali and others. 2008. Wildlife response to riparian restoration on the Sacramento River. San Francisco Estuary and Watershed Science. 6(2):1-26 • Nur, N. G. Ballard, and G.R. Geupel. 2008. Regional Analysis of riparian bird species response to vegetation and local habitat features. The Wilson Journal of Ornithology. 120(4):840-855. • USDA Forest Service Gen. Tech. Rep. PSW-GTR-191. 2005
132	2.IV.	Neotropical Migratory Birds	This section fails to address many of the Neotropical migrant bird species that are listed or have been extirpated from the riparian habitat in the Sacramento Valley (e.g. Bank Swallow, least Bell's Vireo, Willow Flycatcher, Warbling Vireo, Yellow Warbler, Pacific-slope Flycatcher, etc.)
132	2.IV.	Paragraph 3	The paragraph on SWHA states that eggshell thinning due to pesticide effects as a stressor. Is there a contemporary reference available for this statement? This is contradictory to the literature on the species: Risebrough, R.W., and others. 1989. Investigations of the decline of Swainson's hawk populations in California. The Journal of Raptor Research. 23(3):63-71.
141	2.V.	FloodSAFE California and the Central Valley Flood Protection Plan.	It is not clear how the ERP Conservation Strategy is engaged with this effort.
180	#3-III: Selenium	Paragraph 3	ERP contends that SJ Basin floodplain inundation of >30 days would happen once every 7 to 20 years. It is unclear if this is pre or post restoration efforts. DWR should evaluate this propose and determine if it is backward or forward looking based, to estimate a better frequency rate. It should be suggested that DFG propose practical selenium solutions.
189	3.IV.	Paragraph 1	Until non-native predators have been removed from the Delta Ecosystem, Sacramento perch will not likely have a self-sustaining population. Any effort to create a self-sustaining population of Sacramento perch in the Delta will be futile and a waste of resources as non-native predators will continue to outcompete them.

Page #	Section #	Paragraph #	Comment
191	3. IV.	Swainson's Hawk	Is it possible to provide more information on the status of SWHA in the San Joaquin Valley? And what the restoration needs are of the species in this portion of its range?
192	3.IV.	California Yellow Warbler	Yellow warbler has been largely extirpated in the Sacramento (Gaines 1974) and San Joaquin Valley (PRBO unpublished data) for over 4 decades. This would be an excellent place to talk about the response of the species to restoration activities at SJNWR since 2005. Also a discussion of restoration activities specific to the SJ Valley that are needed by the species.
193	3.IV.	Neotropical Migratory Birds	This section could better address many of the Neotropical migrant bird species that are listed or have been extirpated specifically from the riparian habitat in the San Joaquin Valley (e.g. Bank Swallow, least Bell's Vireo, Willow Flycatcher, Warbling Vireo, Yellow Warbler, Pacific-slope Flycatcher, etc.).
199	3.V.	FloodSAFE California	Similar comment to the above FloodSAFE paragraph on page 141.
37 and 340	IV: Species and Appendix F		The purpose of Appendix F is confusing when it is referred in the document. Is Appendix F supposed to be a list of species in the 244 species evaluated by the CalFed MSCS, or is it a list of species covered by HCPs in the plan area? The connection here isn't clear.
268-271	App C	Restoration Priorities	It would be helpful to provide an overview Delta map identifying the general location of all prioritized restoration areas. This would put the restoration priorities into perspective. The map could be small-scaled (not detailed) and identify prioritized areas with soft (feathered) boundaries.
38	1.II	Figure 4	Map is small, which makes text difficult to read. Recommend re-sizing the map to fill the page.
126	2.III.	all	Please list citations for the studies mentioned on page 126.
172	3.III.	Heading	Should be spelled "Stressors" and in the Table of Contents page iv.
51	#1-II: Deep OpenWater Habitat	Paragraph 5	ERP is promoting the 'intentional removal of levees on islands at the periphery of the Delta'; this will support DWR's BDCP restoration efforts through its ROAs to breach such levees.
68	#1-III: Mercury and Methyl-mercury	Paragraph 2	ERP states that improving the Cache Creek Settling Basin is identified as the most cost-effective way to reduce the metals load in the Yolo Bypass and Delta. A redesign of the Basin to include Knights Landing Ridge Cut would greatly help solve salmonid and green sturgeon entrainment problems in Yolo Bypass and would reduce concerns of mercury methylation from restoration efforts in Yolo Bypass.
72	#1-IV: Species	Paragraph 3	ERP refers to Delta Vision to establish migratory corridors. This will support efforts to improve fish passage in the Yolo Bypass.
90	#1-VI: Yolo Bypass	Paragraph 2	ERP states that it is a high priority to restore Yolo Bypass to provide floodplain, riparian, grasslands, and vernal pools is supportive of BDCP objectives.
130	#2-IV: Splittail	Paragraph 2	ERP states that to improve splittail populations will require special management of the Yolo and Sutter Bypasses. BDCP is planning managed flooding.
148	#2-VI: Safe Harbor	Paragraph 4	ERP supports the use of Safe Harbor Agreements and Habitat Conservation Plans could help restoration efforts for floodplains and breached islands.
149	#2-VI: Riparian Habitat and Levee Veg	Paragraph 5	ERP supports vegetation on levees and that vegetation management can and should be changed on the levees.

Page #	Section #	Paragraph #	Comment
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163	#3-I: Floodplains and Flood Processes	Paragraph 2	ERP advocates creating floodplains along the lower San Joaquin River with levee breaches and levee setbacks. This would increase the system's capacity and lower the flood risks.