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**From:** William Jennings <deltakeep@me.com>  
**Sent:** Monday, July 28, 2014 3:02 AM  
**To:** BDCP Comments  
**Cc:** Mike Jackson  
**Subject:** CSPA BDCP and EIR/EIS Comments: Comment Letter No. 1  
**Attachments:** CSPA BDCP Ltr. No. 1, Habitat.pdf; CSPA Ltr.1, Exhibit 1 HabitatReview.pdf

Dear Mr. Wulff,

Please find attached, the California Sportfishing Protection Alliance's (CSPA) comment Letter No. 1 on the BDCP and associated EIR/EIS.

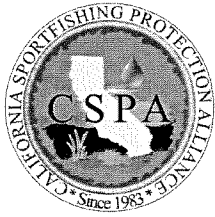
Comment letter No. 1 relates to the habitat restoration and conservation measures, etc. Also attached, is Exhibit 1 and it is a continuing part of our specific comments and both documents should be responded to jointly.

We would appreciate a receipt of timely submission. Thank you.

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## California Sportfishing Protection Alliance

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28 July 2014

Mr. Ryan Wulff  
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Sacramento, CA 95814  
BDCP.Comments@noaa.gov

VIA: Electronic Submission  
Hardcopy if Requested

RE: Comment Letter No. 1: Bay Delta Conservation Plan and Associated EIR/EIS Related to  
Habitat Restoration and Conservation Measures

Dear Mr. Wulff,

The California Sportfishing Protection Alliance (CSPA) has reviewed the proposed Bay Delta Conservation Plan and associated Environmental Impact Report/Environmental Impact Statement (hereinafter, BDCP) submits the following comments. Comment Letter No. 1 relates to habitat restoration and conservation measures intended to important habitat. This Comment Letter includes an attached report titled *Overview of Delta Habitat Restoration*, which analyzes recent Delta habitat restoration projects and includes an appendix that compares the "Overview" with the habitat assessment in BDCP Appendix 5E and identifies major flaws in the proposed native fish habitat restoration program. We request that both documents be considered and responded to as a single submittal.

CSPA worked closely with the Environmental Water Caucus (EWC) in developing their comments and incorporates by reference into these comments both submittals by the EWC on all issues related to BDCP. We also incorporate by reference the submittal by Michael Jackson on behalf of CSPA, California Water Impact Network and AquAlliance, as well as the individual comments submitted by AquAlliance. We further incorporate by reference the submittals by the County of San Joaquin, South Delta Water Agency, Central Delta Water Agency, Restore the Delta, Earth Law Center and Friends of the River, insofar as they are consistent with these comments.

### **Summary Overview**

As discussed more fully below, the BDCP conservation measures to improve important aquatic communities and habitats in the Delta Plan Area are wholly inadequate to mitigate for the expected effects of the BDCP. BDCP and its associated EIR/EIS fail because they are predicated upon a series of monstrous and demonstrably false premises. Based upon these premises, they serve up a many-thousand page omelet of distortion and half-truth in order to reach their predetermined conclusion.

BDCP peddles a revisionist thesis that the Delta’s fisheries collapsed because of the historical loss of the pre-reclamation mosaic of Delta habitat. It asserts that severely degraded fisheries can be significantly improved by simply restoring habitat. It claims that restoration of physical habitat can successfully serve in lieu of flow and does so based upon a conceptual programmatic level document. It asks one to believe that you can deprive an estuary of more than half of its flow, turn its hydrograph on its head and expect that fisheries that evolved over millennia, under the historical flow regime, will prosper. The stark reality is that no estuarine ecosystem in the world has survived such insult.

The facts are: 1) reclamation of Delta islands was completed by the second-to-third decade of the last century; 2) Delta fisheries remained relatively stable until the advent of the state and federal export projects; 3) there is now more habitat in the Delta than existed eighty years ago; 4) physical habitat restoration projects in the Delta have largely failed; and 5) the estuary’s ecological collapse and one-to-two magnitude declines in anadromous and pelagic fisheries and lower trophic communities occurred after the projects began exporting millions of acre-feet of water yearly.

Habitat is more than the spatial extent of acreage: an increase in habitat area doesn’t ensure increases in habitat quality or functionality. The amount of freshwater inflow to an estuary is a physical and ecological driver that defines the quality and quantity of estuarine habitat. As the U.S. Fish & Wildlife Service testified during the State Water Resources Control Board’s 2010 flow hearing, “flow in the Delta is one of the most important components of ecosystem function.”

Habitat requires adequate physical (flow, residence time, variability, etc.) and chemical parameters (salinity, temperature, turbidity, chemical constituents, etc.), as well as the nutrients necessary for primary production to support renewable fisheries. The export projects have radically altered the Delta’s hydrodynamics, which has resulted in a loss of critical flows, degraded water quality and reduced primary productivity. The yearly export of phytoplankton biomass is equivalent to more than 30% of net primary production. This altered hydrology has allowed myriad invasive non-native species to become entrenched to the detriment of native communities.

BDCP proponents confidently assume that proposed habitat restoration projects will be successful. The fact is the majority of restoration projects in the more than 222,902 acres of existing “conservation lands” scattered throughout the Delta have failed to achieve their forecasted goals. Many of these project areas are now habitat dominated by assemblages of invasive species that compete with and prey upon native species, including those listed pursuant to state and federal endangered species acts. Proposed restoration projects are unlikely to provide anticipated benefits unless the physical and chemical parameters approximating historical levels (i.e., mid-20<sup>th</sup> Century conditions) necessary for native species are also reestablished.

The consistent flaw of previous restoration efforts in the Delta has been a failure to adequately meet the habit requirements of native fish. The estuary’s native species evolved over many

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thousands of years in response to prevailing habitat conditions. Successful restoration of native species requires restoring the conditions under which they evolved and prospered. This entails increasing outflows, mimicking the natural hydrograph, improving water quality, protecting the critical low salinity zone (LSZ) and reducing export of primary productivity. However, these are the essential elements BDCP cannot and will not provide.

The critical need for significantly increased Delta outflow is beyond scientific doubt. The State Water Resources Control Board, in its legislatively mandated 2010 report on needed Delta flows declared, “the best available science suggests that current flows are insufficient to protect public trust resources.” Substantial increases in Delta outflow were recommended. The California Department of Fish and Wildlife, in a similar legislatively mandated report on necessary biological objectives and flow criteria, found, “recent Delta flows are insufficient to support native Delta fishes in habitats that now exist in the Delta.” The San Francisco Estuary Partnership’s 2011 State of San Francisco Bay report observed, “scientists now consider poor freshwater inflow conditions to be one of the major causes for the ongoing declines of fish populations observed in the upper Estuary.”

Conservation measure CM1 is essentially a water conveyance project masquerading as a conservation measure. It will reduce outflow and exacerbate already poor Delta hydrological habitat that is essential for key fish species and their critical habitats. While presented as a project level analysis, less than ten percent of engineering and even less of the geotechnical investigation has been completed. Yet project proponents brazenly claim that all potential adverse impacts have been identified.

Conservation measures CM 2-21 are only presented and analyzed at a programmatic level, lack assured funding and are highly unlikely to achieve the predicted results. There are no assurances that proposed habitat protections and enhancements will be able to overcome the long-term detrimental effects of excessive Delta water diversions or the proposed new North Delta conveyance facilities with experimental fish screens. Indeed, the programmatic nature of the conservation measures precludes anyone from identifying the number and extent of impacts to biological resources, water quality, and other beneficial uses; let alone determining whether the conservation measures will effectively mitigate impacts.

The conservation measures applicable to securing a take permit for CM-1 (Water facilities and Operation) include: CM-2 (Yolo Bypass Enhancement), CM-3 (Natural Communities Enhancement), CM-4 (Tidal Marsh Creation/Restoration), CM-5 (Seasonal Floodplain Creation/restoration), CM-6 (Channel Margin Enhancement), CM-7 (Riparian Restoration), CM-10 (Non-tidal Marsh Restoration), CM-11 (Natural Community Enhancement) and possibly CM-16 (Non-Physical Fish Barriers). Many of these measures were included as Stage 1 Action Items in the 2000 CalFed Record of Decision but were never implemented or were partially and/or unsuccessfully implemented with unintended adverse consequences. Funding is highly speculative, subject to congressional or legislative authorization or bond passage. Implementation can proceed with or without BDCP and these measures should have been required mitigation for adverse impacts created by operation of the present export facilities.

Conservation measure CM-2 (Yolo Bypass Enhancement), and conservation measures CM-12 (Mercury Enhancement), CM-13 (Invasive Vegetation), CM-14 (Stockton Ship Channel O2), CM-15 (Predatory Fish), CM-16 (Non-Physical Fish Barriers), CM-17 (Illegal Harvest Reduction), CM-18 (Hatchery Management), CM-19 (Urban Stormwater), CM-20 (Invasive Species), CM-21 (Non-Project Diversions) are, for the most part, not dependent on BDCP. In varying degrees, these measures have long been necessary, are already underway, being approved, financed and managed by others. They will likely proceed regardless of whether BDCP's conservation measures are approved. BDCP should not be seeking credit for these ongoing activities.

A number of critically important conservation measures are conspicuously absent in BDCP. While CM-1 focuses on experimental fish screens at the north Delta diversions, it ignores requirements in the CalFed Record of Decision to upgrade the existing inadequate 1950s-era fish screens in the south Delta to current screening criteria. The South Delta Fish Facilities Forum ceased development of the new screens in 2005 after the state and federal contractors said they wouldn't pay for them. Between 2000 and 2011, more than 130 million fish were salvaged at project facilities, many of which were lost during collection, handling, trucking and post-release predation, and more than a billion fish were estimated lost due to high predation in and around the export facilities.

There are no conservation measures proposed for San Pablo and San Francisco Bays despite the massive impacts the export projects have had and will have on the Bays. A median of 39% of the estuary's unimpaired runoff is already consumed upstream or diverted. Exports sometimes exceed 50% of inflow. Shifts in the seasonal hydrograph and movement of the low salinity zone (LSZ) upstream have been marked by major declines of native phytoplankton, zooplankton and pelagic fish and huge shifts in biological communities. Construction and operation of CM-1 will intensify these problems. Yet BDCP continues to deny that it has any role in creating or mitigating these impacts.

There are no conservation measures proposed for impacts upstream of the Delta. Despite repeated denials by proponents, construction and operation of CM-1 will necessitate reoperation of upstream reservoirs, with resulting instream impacts. Increased total export capacity, especially in drier years at the north Delta diversion point, opens the door to myriad opportunities to significantly increase water transfers. Water transfers are generally authorized under temporary transfer rules or emergency proclamations and receive little or no environmental analysis. BDCP severs the Delta from the upper and lower segments of the watershed to avoid having to acknowledge or mitigate impacts.

Nor are there any conservation measures proposed for the largest source of pollutant loading to the Delta: discharges from irrigated agriculture. The entire Delta is identified on the 2010 Clean Water Act 303(d) List as impaired and incapable of supporting beneficial uses because of agricultural pollutants. A 2007 Regional Board survey of monitoring data from 313 agricultural sites in the Delta and Central Valley revealed that; toxicity to aquatic life was present at 63% of the sites (50% were toxic to more than one species); pesticides criteria were exceeded at 54% of sites (many for multiple pesticides); metal criteria was violated at 66% of sites; human health standards for bacteria were violated at 87% of sites while more than 87% of the sites exceeded

general parameters (dissolved oxygen, pH, salt, TSS, etc.). By reducing inflow of relatively good quality water (i.e., reducing dilution) and increasing the time for pollutants to interact with the ecosystem, CM-1 will exacerbate existing impacts.

Perhaps the most flagrant omission is the fact that proposed conservation measures do not include protection and enhancement of the most important and affected habitat in the Delta: the low salinity zone (LSZ) and freshwater pelagic habitats of the Delta on which many Delta native fishes including Delta Smelt depend. These habitats are unproductive because they are entrained and exported in drier years and summers of most years at the existing south Delta export facilities and thus lack the necessary residence time, nutrients, and water quality to sustain pelagic fish production.

The West Delta Restoration Opportunity Area (ROA) especially lacks measures to protect important tidal marsh, aquatic shoreline (channel margin), riparian and pelagic open water habitats despite its overall importance and sensitivity to Delta exports. There is no Central Delta ROA and this Delta region's habitat appears to have been largely ignored by BDCP planners for restoration, despite its central location in the area most affected by the North and South Delta exports. Conservation Zone 1 and 2, the center and northern Yolo Bypass, also lack needed measures on non-tidal marsh, riparian, seasonally inundated floodplain and channel margin habitats and are not included in any ROA.

If BDCP proposes to continue massive water supply exports from the Delta, it must propose meaningful measures to replace the millions of acre-feet of pelagic habitat lost each year to the export pumps and prevent native species that depend on that habitat from going extinct. CM1 fails to provide the enhanced outflow that fish agencies, regulators and independent scientists have observed is critical to the restoration of the estuary. Instead BDCP offers less outflow in order to enhance water supply benefits.

### **Other Summary Points**

1. Potential export capacity under CM-1 would increase from the present 11,400 cfs to 15,000 cfs, with the existing array of pumps and the new, "isolated" forebay at Clifton Court. There are no credible measures offered to reduce the millions of acre-feet of pelagic habitat that will be exported from the North and South Delta each year under the BDCP. Increased export of pelagic habitat will exacerbate recent population declines and prevent recovery of pelagic species because of further habitat degradation.
2. CM-1's north Delta fish screens are experimental and will require variances from present fish screen criteria. Screen design was based on laboratory studies and it is unknown if the laboratory studies are representative. Consequently, a number of studies are required to see if the proposed screen design concept will work, will be protective or if the screens can be legally permitted. Half of these studies are proposed post-construction. BDCP rejected requests by NOAA Fisheries and recommendations by the BDCP Fish Facilities Technical Team that construction be phased to see if the first one works before constructing the rest. Delta smelt are present at the diversion point February through June and no screens can prevent

- entrainment of eggs and larval Delta smelt, longfin smelt, splittail, striped bass American shad or smaller lamprey ammocoetes.
3. Tidal wetlands are proposed under CM-4 for five ROAs. Three of the five proposed wetlands are Suisun Marsh ROA, Cosumnes/Mokelumne ROA, and Cache Slough ROA. These wetlands will have marginal benefit to key Delta food webs because of isolation from the LSZ and key pelagic habitats. Invasive overbite clams limit food-web production in Suisun Bay and Marsh. Reductions in North and East Delta inflows from proposed North Delta exports would reduce net transport of water and food web contributors from Cache Slough and East Delta. The Cosumnes/Mokelumne ROA will become more isolated from Delta inflows than under present conditions.
  4. Suisun Bay LSZ habitat will further deteriorate, as the LSZ moves into the Delta and becomes less productive due to lower Delta outflows predicted under CM-1, especially in drier years. Delta outflow remains the most critical factor in Suisun Bay and the Delta portions of the LSZ nursery areas that are critical to smelt and other pelagic species.
  5. CM2 focuses on the Yolo Bypass, Cache Slough, and Sacramento Ship Canal habitats but offers little potential improvement to existing poor water quality conditions (mainly high water temperature and low dissolved oxygen) in these areas, especially during spring and summer when these areas are important salmon and smelt nursery areas. In drier years, spring-summer habitats will suffer from reduced freshwater inflow to Cache Slough from its primary freshwater sources (Miner, Steamboat and Sutter Sloughs) because of the proposed North Delta exports.
  6. CM3 lacks focus and actions on West and Central Delta tidal wetland improvements, as large areas of the West Delta tidal wetlands (i.e., West Sherman Island and Big Break) suffer from extensive invasion of non-native submerged aquatic vegetation and deteriorating channel margin habitat (Figure 3.4-27).
  7. There is a general lack of focus on the linear shoreline habitats throughout the Delta. Smelt and salmon rearing are far more concentrated in shoreline and nearby open-water habitats than in tidal marshes. CM-6 proposes to restore less than 2% or only twenty of more than seven hundred miles of channel habitat over a thirty-year period.
  8. There is a lack of specific restoration strategies regarding habitats, locations, and timing of habitat improvements relative to the needs of each of the listed and soon-to-be-listed native fishes in the Delta
  9. There are no credible measures offered to reduce the millions of acre-feet of pelagic habitat that will be exported from the North and South Delta each year under the BDCP.
  10. There is no mention of the detailed habitat improvement actions presented in the smelt, salmon, and steelhead state and federal recovery plans.
  11. There are repeated references to adaptive management actions that will adjust habitat improvement actions of the BDCP but virtually no details on how adaptive management will actually be implemented or funded. Adaptive management programs have frequently failed throughout the nation, as have decades of adaptive management actions on dozens of failed habitat mitigation projects that were constructed in the Delta.

12. Many of the proposed habitat actions already exist and/or will likely be implemented in the future without the BDCP. These actions should be considered part of the baseline or no-action alternative in the EIR/EIS and not included in BDCP's portfolio of habitat mitigation measures.
13. The proposed restoration projects are insufficient in amount and quality of aquatic habitat to meet the goals and objectives of the BDCP. There is a high degree of uncertainty they will be able to achieve expected goals. Yet, there is no discussion of historical habitat restoration projects, analysis of the results of implementation or why the proposed habitat projects will have different outcomes.
14. CM-1 proposes to operate pursuant to requirements in D-1641 and existing biological opinions. These standards are seriously inadequate as evidenced by the continuing collapse of Delta fisheries. Additionally, the State Water Resources Control Board has failed to take enforcement action against the state and federal projects for thousands of documented violations of D-1641 standards and the fishery agencies have demonstrated a willingness to weaken requirements in the biological opinions at the request of project operators.

The assumptions and conclusions that buttress the BDCP and EIR/EIS conservation strategy and goals are egregiously flawed and technically invalid. Consequently, the analysis of impacts regarding CM1-22 and likelihood of success of the various conservation mitigation measures are seriously deficient and fail to meet minimum CEQA or NEPA standards for environmental review. BDCP must be returned to the drafting table and a new EIR/EIS should be circulated for public review and comment.

### **Development of the Broad Conservation Goals, Types of Restoration Action Evaluated and Specific Conservation Measures**

The BDCP Introduction, Chapter 1, pages 1-2 and 1-3, identifies the broad conservation goals of BDCP's conservancy strategy. The goals are repeated in Chapter 3, Conservation Strategy (3A-2 and 3A-3), which also describes the strategy as being built upon *scientific tenets that reflects the current state of available science* (3A-2, lines 38, 39). Chapter 3, Appendix 3A, page 3A-13, lines 19-32), describes the types of habitat restoration and enhancement actions that were evaluated for inclusion in the conservation strategy. Based upon the evaluation of the *types of habitat restoration and enhancement actions that were evaluated for inclusion in the conservation strategy* and development of the *broad conservation goals*, BDCP offers 22 specific conservation measures to advance the goal of restoring the Delta's ecological functions (Chapter 3, Part 2, Conservation Strategy, 3.4, pages 40-353).

Below are our specific comments on: A) the *broad conservation goals* of BDCP's conservancy strategy; B) the *types of habitat restoration and enhancement actions that were evaluated for inclusion in the conservation strategy* and C) the *specific conservation measures CM 1-21*.

#### **A. Broad Conservation Goals and Strategy**

The Broad Conservation Goals and Strategy are discussed in Chapter 1, pages 1-2 and 1-3; and Appendix 3A, pages 3A-2, lines 38-42 and 3A-3, lines 1-21. Goals 1 through 8



and 11 are applicable to fisheries. They include:

***1. Increase the quality, availability, spatial diversity, and complexity of aquatic habitat in the Delta.***

CM1-11, if implemented as proposed, would not lead to increased habitat quality and complexity in a timely manner. The main limitation is the lack of potential improvement to pelagic open water habitat under CM1 and lack of the indirect benefits of the other conservation measures to key LSZ pelagic habitats of the West and Central Delta.

***2. Create new opportunities to restore the ecological health of the Delta by modifying the water conveyance infrastructure.***

The potential restore ecological health to the Delta is severely restricted by retention of the south Delta export facilities, especially without upgrading them to state-of-the-art standards and current criteria fish screen criteria. The potential for Delta pelagic and shoreline habitats to improve is restricted by the proposed large fine mesh passive screen intake infrastructure in the North Delta.

***3. Directly address key ecosystem drivers in addition to freshwater flow patterns rather than manipulation of Delta flow patterns alone.***

Freshwater flow patterns in the Delta under CM1 remain the critical ecosystem driver in the Delta. Enhanced ecosystem inputs from new margin wetland and floodplain habitats will not be of benefit if they cannot contribute to the pelagic habitats of the West and Central Delta. Under the BDCP proposal both Suisun Marsh and Cache Slough Complex would be more isolated from contributing to the LSZ than under present conditions.

***4. Improve connectivity among aquatic habitats, facilitate migration and movement of covered fish among habitats, and provide transport flows for the dispersal of planktonic material (organic carbon), phytoplankton, zooplankton, macroinvertebrates, and fish eggs and larvae.***

The proposed North Delta exports will reduce connectivity and create a serious impediment to migration and movement of salmon, smelt, steelhead, sturgeon, and many other important fish of the Central Valley. The North Delta diversions and continuation of South Delta diversions will entrain vast amounts of biological organisms, nutrients, and other essential elements of Bay-Delta productivity.

***5. Improve synchrony between environmental cues and conditions and the life history of covered fish and their food resources in the upstream rivers, Delta, and Suisun Bay, including seasonal water temperature gradients, salinity gradients, turbidity, and other environmental cues.***

The proposed North Delta exports and continued significant reliance on South Delta exports will further add to reduced synchrony of natural environmental cues to which native fishes are adapted. Food sources will be reduced, water temperatures will increase, salinities will increase, turbidity will be further reduced, and environmental cues will be further disrupted.

**6. *Reduce sources of mortality, and other stressors, on the covered fish and the aquatic ecosystem in the Delta.***

Delta smelt have suffered relentlessly from the direct and indirect effects of past and present levels of exports from the Delta. A switch of exports to the North Delta upstream of the main pelagic habitats of the smelt will simply increase the risk of smelt to South Delta exports and further degrade smelt critical habitat in the West, Central, and North Delta, as well as Suisun Bay. The North Delta intakes will add a significant source of mortality to Sacramento Valley listed salmon and steelhead that does not exist today. Continuation of South Delta exports does little to alleviate existing stressors that are related to fish growth, survival, and reproduction. Freshwater Delta inflow from the Sacramento River will decrease and inflow from the San Joaquin River will increase, thus contributing to even warmer water in the Delta from spring through summer and early fall. LSZ pelagic habitat of Delta Smelt would be drawn upstream into the influence of north Delta diversions and screening systems (which do not protect smelt). Pelagic low-salinity cool water Delta habitat would also suffer under new North Delta exports and continuing South Delta exports to the point where at a minimum no benefits would accrue. (Appendix 5B forecasts little if any benefits from reduced entrainment to Delta Smelt from the BDCP.) As for salmon, there will be more opportunity for the populations from the Sacramento River system to interact with the project screen systems than under the present configuration. Finally, continuation of the south Delta exports will maintain most of the present risks to these populations.

**7. *Improve habitat conditions for covered fish in the Delta and downstream in the low salinity zone of the estuary in Suisun Bay through the integration of water operations with physical habitat enhancement and restoration.***

Major habitat enhancements of the proposed conservation measures are isolated from the LSZ of the estuary. Proposed water operations and infrastructure (including the proposed North Delta export facilities) would further isolate, not integrate, proposed habitat improvements.

**11. *Emphasize natural physical habitat and biological processes to support and maintain species covered by the Plan (i.e., covered species) and their habitat.***

The biological processes and habitats of the LSZ in the West and Central Delta are virtually ignored in the conservation measures. The natural pelagic habitats so important to Delta fishes are virtually ignored in the BDCP.

