

**Bay Delta Conservation Plan  
 Disposition of Steering Committee Comments on the  
 July 27, 2009 Draft Chapter 3 Conservation Strategy  
 (October 20, 2009)**

This table contains comments received from BDCP Steering Committee members on the July 27, 2009 Draft Chapter 3 *Conservation Strategy*. Comments were compiled from various reviewers in order of general comments followed by specific comments in order of page and line number in the document. The disposition of these comments in the next draft of Chapter 3 is provided in the last column titled “Disposition.”

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| <b>General Comments</b> |        |           |        |   |  |   |
| 1                       |        |           |        | Deanna Sereno<br>Contra Costa<br>Water District | <p>Greg Gartrell asked me to send our initial comments on the Working Draft Conservation Strategy (Chapter 3). We may have more comments to follow, but a number of our concerns relate to the near-term conservation measures that will be discussed at next week’s Steering Committee, hence this initial transmittal. We will finalize our review of Chapter 3 and possibly provide additional comments next week.</p> <p>We recognize the challenges inherent in the immense task of converting the Steering Committee direction into draft language, and compiling and addressing comments on such a complex package of conservation measures. We truly appreciate all the hard work that has gone into the development of this chapter. Additionally, we hope that continued consideration and incorporation of stakeholder comments will further strengthen the final BDCP document.</p> <p>CCWD was encouraged to see that some of our prior comments on Sections 3.1 and 3.2 have been addressed in the current draft, including recognition of the “growing urgency” to address Delta challenges, recognition of the need to thoroughly analyze alternative conveyance capacity and design, inclusion of the 2-Gates project in the near-term, and inclusion of modified upstream operations in an attempt to comply with the 2009 NMFS BO RPAs (although we’ve heard the modifications are still unable to meet NMFS Shasta performance criteria at all times).</p> | <p>Conservation measures identified in Chapter 3 and other possible conservation measures are under ongoing iterative review.</p> <ul style="list-style-type: none"> <li>- The new intakes, conveyance, and operating criteria are identified as both covered activities (in Chapter 4) and conservation measures (in Chapter 3) as these facilities and their operations serve to meet goals for avoiding and minimizing take of fish and improving water supply reliability.</li> <li>- Hypotheses identified for each CM were written to be testable and consistent; hypotheses will be reviewed as per commenter’s concern.</li> <li>- Placeholders for Table 3.10 and 3.11 will include</li> </ul> |

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|   |        |           |        |  | <p>We also note that a number of our previous concerns have yet to be addressed, including the need for effective near term actions, such as pilot fish screens at the existing export facilities, and measures to address the reverse salinity gradients in the south Delta that generate false migration cues. We look forward to a productive Steering Committee meeting next week to address the near term measures and learn of the preliminary effects analysis for the long-term operations.</p> <p>Other General Comments include:</p> <ul style="list-style-type: none"> <li>• The new intakes, conveyance, and operating criteria should not be classified as conservation measures (CM). This has not been decided by the Steering Committee.</li> <li>• Some hypotheses are unsubstantiated and/or untestable. Hypotheses for different CMs often contradict each other. If possible, these conflicts should be resolved; at a minimum, the contradictions should be recognized within the document.</li> <li>• Monitoring and Research Program implies that the hypotheses will be tested, but the framework and specific experiments have not been defined.</li> </ul> | <p>specific monitoring actions and metrics; these are in preparation.</p>  |
| 2 |        |           |        | <p>Justin Fredrickson<br/>                     California Farm Bureau Federation</p> | <p>Overall, the document looks very good. Our review, however, has raised some concerns.</p> <p>Major substantive concerns are denoted in the attached line-by-line comments in boldface, red text. For the most part, these concerns related, primarily, to aspects of Conservation Measures WOCMN14 (near-term in-Delta water quality), WOCML5 (proposed long-term DCC ops), WOCML14 (long-term in-Delta water quality), HRCM9 (brackish tidal marsh, Suisun Marsh), OSCM4 (agricultural pesticides and herbicides), and OSCM21 (non-project diversions).</p> <p>Of these main substantive concerns, the <i>most</i> significant relate to WOCMN14 and WOCML14 (long-term in-Delta water quality),</p>   | <p>General comment states that specifics comments are provided in commenters line-by-line review, therefore see the line-by-line disposition of those comments below. Concern regarding water quality will be addressed as part of ongoing discussions among the various interested parties. The footnote in the more recent</p> |

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|  |        |           |        |           | <p>although several of the other concerns as well are water quality-themed as well (e.g., long-term DCC ops and Suisun Marsh tidal marsh).</p> <p>Concerning WOCMN14 and WOCML14, in particular, the concern we have is, in large-part, an unfortunate repetition of the same concerns we were having with Parameter #8 in the Draft Water Operations Parameter Table on page of the 3-74 of the July 31, 2009 Draft Conservation Strategy, before negotiating the footnote to that parameter that this presently included in that table as a temporary resolution of that issue.</p> <p>Specifically, the issue has been that the previous language of parameter #8 (as originally drafted in the draft water operations parameters on pages 3-70 through 3-74)—and, now, the current language of conservation measures WOCMN14 and WOCML14 as well (near- and long-term in-Delta water quality)—has referred expressly to maintenance of water quality standards in the North and West Delta, and to fulfillment of DWR’s contractual obligations to the North Delta Water Agency and others, <u>but has expressly omitted any reference to maintenance of existing or future, non-contractual water quality M&amp;I and agricultural standards in the South and Central Delta.</u></p> <p>While the footnote to the Draft operations table addressed this concern with respect to the limited life-time of that table (for purposes of moving forward with the BDCP’s initial effects analysis), the problem remains now unaddressed in the portions of text dealing with WOCMN14 and WOCML14—and will likely be source of continuing concern, if the same omission recurs in the proposed “near- and long-term operations ranges” SAIC is scheduled to unveil at the BDCP’s September 10 meeting of the Steering Committee.</p> <p>At this time, we would like to request an offline dialogue to attempt to proactively work through these issues as soon as possible (preferably, in advance of the Steering Committee’s September 10, 2009 meeting), so as to achieve some understanding that can address these recurring concerns and allow us to move forward more comfortably with the plan</p> | <p>draft operations table reflects the present status of ongoing discussions.</p> |

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|   |        |           |        |                                   | <p>as a whole.</p> <p>Aside from and more important than our own comfort, of course, we also believe that it is in best interest of the BDCP process to proactively address concerns relating to Delta water quality, to the fullest extent practicable, as in our opinion the issue could otherwise present itself as a major blemish on what, for the most part, appears to be shaping up to be very thorough and balanced plan.</p> <p>Incidentally, I had an opportunity to mention some of these concerns to Kathy Kelly of DWR's South Delta Office after the last Steering Committee and am copying her on this e-mail. In addition, I am copying Jerry Johns, with whom we were able to work with successfully on the footnote to the operations parameter table for BDCP's effects analysis.</p> <p>I am also copying Greg Gartrell and Deana Sereno with CCWD and Melinda Terry with NDWA, to the extent they, along with CFBF, represent interests that have taken an active interest in the past in water quality in the Delta under potential dual conveyance system.</p> <p>We will be looking forward to any indications from Jerry, BDCP management, or others as appropriate as to how we might promptly begin to work through and finally achieve some more lasting resolution on these important issues. Thanks in advance for your prompt attention.</p> |   |
| 3 |        |           |        | National Marine Fisheries Service | <p>1. The document cross references BDCP biological objectives and conservation measures (Tables 3.1, 3.2, 3.3); however, there is no clear description of the linkage analysis between the biological objectives and conservation measures. What qualitative and/or quantitative analyses will be conducted to evaluate the extent to which conservation measures will meet and/or address biological objectives?</p> <p>2. Furthermore, the descriptions of the conservation measures and biological goals and objectives are very general with many unstated assumptions. With such general descriptions, it is unclear how well (or if) the conservation measures will meet the biological goals and</p>   | <p>1. An effects analysis is currently underway (to be reported in Chapter 5 <i>Effects Analysis</i>) that will provide the evaluation of how well conservation measures are expected to perform in meeting goals and objectives.</p> <p>2. Additional detail will be</p> |

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|   |        |           |        |                                   | objectives, or the degree to which the measures are successful in meeting the biological goals and objectives.  | added to conservation measures, as appropriate, during the planning process and specific monitoring actions, monitoring metrics, and metric values are currently in development that will serve as tools to support and guide the adaptive management program.                  |
| 4 |        |           |        | National Marine Fisheries Service | 3. Provide a chart illustrating the timing and sequence of the implementation of various habitat restoration measures in relation to the construction and operation of the canal.   | The BDCP implementation schedule has been provided in draft Chapter 6, <i>Implementation Plan</i> .   |
| 5 | All    | All       | All    | Kate Brooks DWR                   | <p>This is a general comment. For the most part, this is a well-written and organized document. There are clearly in-progress sections and lots of cut and paste placeholders. This is understandable and I assume improvements are coming. The writers have captured the DRERIP evaluations quite well.</p> <p>My primary concern for the document is that “adaptive management” seems to be misunderstood and thus it is applied somewhat incorrectly and only as an afterthought. AM was developed as a concept to deal with ecological uncertainty in the late 70’s and 80’s chiefly by Holling and Walters (Holling 1978, Walters 1986, Waters and Holling 1990). It offers a framework for doing landscape scale restoration in the context of uncertainty about conservation measure outcomes. I believe AM offers a powerful organizing principle for BDCP conservation, rather than just an element we tack on after doing “monitoring.”</p> <p>AM begins with conceptual models (like the DRERIP CM’s) to explicitly lay out drivers, processes, and outcomes before a restoration is carried out. From the CM’s and the stated goals of the restoration (namely, conserve listed species), it lays out testable hypotheses (e.g.</p> | Development of the BDCP adaptive management program is still in progress. Adaptive management approaches to each conservation measure and among conservation measures are in development. Approach laid-out by commenter is one possible approach and comments are appreciated. |

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|  |        |           |        |           | <p>tidal marsh will export secondary production), and experiment designs tuned to measure processes in time and space well enough to prove the null-hypothesis. In short, it treats conservation measures properly as applied science experiments where “monitoring” is data collection tuned to support process and outcome understanding. I believe we mistake “monitoring” for process understanding.</p> <p>Process understanding is derived from the dynamic process of conceptual model building, hypothesis clarification, experiment design, scientific analysis and synthesis, reporting and peer review, and finally, adapting the experiment. Conceptual models represent the present state of understanding of ecosystem processes. They are our best guesses about the what, when, where, HOW, and WHY, the ecosystem works the way it does. Conceptual models uncover key uncertainties about outcomes that can be the subject of scientific inquiry. This proceeds by a careful consideration of “what is the question.” Hypotheses turn the questions into testable statements (e.g. “secondary production is exported by tidal marsh”). An experiment is designed to measure the ecosystem outcomes (e.g. the WHAT, WHEN, WHERE of secondary production) and the drivers and processes that explain the outcomes (the HOW and WHY of secondary production processes). Experiment designs that consider landscape scale processes therefore require intensive interdisciplinary special studies. “Monitoring” is the thoughtful deployment of instruments and other observational tools with spatial coverage and time frequency to capture the full expression of expected ecosystem dynamics. THEN THE REAL WORK BEGINS. The key challenge is then to analyze the captured environmental signals by overlaying them and discerning patterns of ecosystem function (the WHAT, WHEN, WHERE part). Then we must figure out WHY and HOW this pattern emerged since, if it’s “good” we want to adapt conservation measures to do more of it, and if it’s “bad” we want to adapt conservation measures to do less of it. Knowing how to adapt requires synthesis of evidence across processes (soil chemistry, hydrodynamics, sedimentation, etc) and analysis of process drivers (climate, flow, wind, solar insolation etc).</p> |             |

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|                          |          |           |                                 |  | <p>Therefore the “BDCP Implementing Entity” should consider all conservation measures as “Applied Science Adaptive Management experiments.” Adaptive Management establishes a formal feedback loop that assures species conservation AND understanding of what we did well and not well. It clarifies the state of ecological understanding and suggests priorities for process restoration and reduction of process restoration uncertainty.</p> <p>In practice, AM will require innovative institutional arrangements to support the somewhat messy process of applied science evaluation, and, in turn, adaptive actions. Special study process science will be required. The old “monitoring program” paradigm should be let go.</p>                         |   |
| <b>Specific Comments</b> |          |           |                                 |  |  |   |
| 6                        | 3-1      | 3.1       | 24-27                           | Greg Gartrell<br>Contra Costa<br>Water District  | Commercial ship passage is also a primary function of the channels and should be recognized in this section. One of the ecosystem goals (ECSY3) is to “[r]educe the adverse effects of non-native species on Delta ecosystem processes and native aquatic species” with a related objective (ECSY3.2) to “[m]inimize the likelihood for future invasions and establishment of non-native species into the Delta’s aquatic ecosystem.” The Department of Fish and Game website ( <a href="http://www.dfg.ca.gov/invasives/">http://www.dfg.ca.gov/invasives/</a> ) states: “Commercial shipping remains a major source of unintentional introductions [of non-native species]...”, yet commercial shipping is absent from the overview and conservation measures. | Text has been modified to indicate that commercial shipping is one purpose for maintaining channels.<br><br>The Steering Committee has not adopted measures to address commercial shipping. |
| 7                        | 3-1      | 3.1       | 28-32                           | Greg Gartrell<br>Contra Costa<br>Water District  | Ignores the role of reservoirs, diversions, and exports in the pelagic organism decline.   | This section enumerates outcomes of human uses of the Delta and is not intended to attribute specific outcomes associated with each use.  |
| 8                        | Page 3-1 |           | 2 <sup>nd</sup> Paragraph, Last | Mike Ford<br>DWR<br>Operations<br>Control Office | This paragraph neglects to mention other well-recognized factors that have contributed to the decline of fish species in the Delta such as extensive urbanization/human development in the Delta watershed, storm runoff and the accompanying pollution it has caused and the  | Text has been modified to address this comment.   |

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|    |          |           | Line                      |   | increase in pesticides from both agricultural and urban development. These factors should be included in the list of causes.  |   |
| 9  | 3-1      | 3.1       | 30-32                     | Various DWR   | Consider restating the last sentence in this paragraph to read: "Key native species populations are protected through increased water releases, which reduces water supply for other uses." This would more clearly illustrate the point.   | Text has been modified to address this comment.   |
| 10 | 3-1      | 3.1       | 39                        | Justin Fredrickson<br>California Farm Bureau Federation | "will result in <del>elevated</del> -rising sea levels"   | Text has been modified to address this comment.   |
| 11 | 3-3      | 3.1       | 2-4                       | Greg Gartrell<br>Contra Costa Water District            | We support the effort to implement the DRERIP conceptual models and request that the analysis be finished, as outlined in the August 17, 2009 letter from The Bay Institute to the BDCP Steering Committee. We agree that the analysis is incomplete, with significant gaps and contradictions. The analysis should be finished, reviewed and standardized, then synthesized to provide a complete picture of the effects of potential conservation measures. In the current draft, many of the hypotheses are unsupported and contradictory. Completing the DRERIP analysis and using the synthesis to inform the conservation measures will greatly improve this product. | Text not modified. The results of the DRERIP analysis have been used and continue to be used to support the development of the Conservation Strategy. A more comprehensive effects analysis of implementation of the Conservation Strategy is currently underway that is utilizing the DRERIP conceptual models and many other tools to assess expected outcomes. This effects analysis will further inform development of the Conservation Strategy. |
| 12 | Page 3-3 |           | 4 <sup>th</sup> paragraph | Mike Ford<br>DWR Operations Control Office              | This paragraph should be rewritten to acknowledge <i>that it may not be possible to maintain the historic Bay-Delta ecosystem as we know it</i> because of changes primarily due to climate change, ocean conditions, sea level rise, non-native introduced species and the extensive urban development in the Bay-Delta's watershed, even though the goal of the BDCP strategy is to do so.  | Text not modified. Goals and objectives are designed to provide for specific biological outcomes and are not directed to returning the Delta to a specific historical   |

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|    |          |           |                           |  |   | state.   |
| 13 | Page 3-4 |           | 1 <sup>st</sup> paragraph | Mike Ford<br>DWR<br>Operations<br>Control Office | It is not at all clear how the measures listed such as operational changes in the timing and amount of flow and water quality are compatible with the stated goal of the BDCP to achieve water supply reliability and some clarification on how the proposed measures for implementation are compatible with that goal should be provided.  | Text has been modified to address this comment.  |
| 14 | Page 3-6 |           | 1 <sup>st</sup> paragraph | Mike Ford<br>DWR<br>Operations<br>Control Office | It is not clear how changes to the Bay-Delta's physical geography to enhance ecosystem productivity will materially affect the ability of the CVP and SWP to meet current and proposed flow and salinity objectives, thus it is unclear how these changes would help achieve the goal of water supply reliability. Some clarification is desirable. This is also true of the last paragraph on Page 3-8 which acknowledges that restoration of large parts of the Delta will affect hydrodynamics and water quality by increasing the tidal prism and reducing tidal range.   | Text not modified. This section describes the BDCP's approach to species conservation.   |
| 15 | 3-8      | 3.2.1     | 29-31                     | Greg Gartrell<br>Contra Costa<br>Water District  | <p>The example given here should be revised (see recommendation below). The shift of diversions from existing South Delta facilities to new North Delta facilities reduces flow on the Sacramento River, Sutter Slough, and Steamboat Slough but may not reduce Delta outflow. Additionally, reversal of flow in Old and Middle River is natural due to the tides; high export levels in the South Delta can cause a NET southward flow in Old and Middle River (i.e. daily average flow is reversed).</p> <p>We recommend the following text to replace the sentence that starts at the end of line 29: "For example, the diversions in the north Delta reduce flow on the Sacramento River and other north Delta sloughs but also reduce the need to export at the South Delta diversions, thereby reducing the entrainment of fish at the existing export facilities."</p> | The text has been modified to address this comment.  |
| 16 | 3-9      | 3.2.2     | 30-31                     | Greg Gartrell<br>Contra Costa<br>Water District  | Operation of dual facilities is not expected to benefit all covered species. For example, FWS has stated multiple times at the Steering Committee meetings that the proposed operations would likely lead to a jeopardy opinion for delta smelt. It is only when examining the operation in combination with other conservation measures that the project may benefit species.  | Text not modified. As the text indicates, dual operations are expected to reduce entrainment of delta smelt relative to current conditions and thus are a benefit to that species. |
| 17 | 3-10     | 3.2.2     | 21-45                     | Various  | Line 21 refers to Yolo Bypass, but line 37 begins "also proposed is the   | Text has been modified to  |

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|    |        |           |        | DWR  | modification of Fremont Weir...” The wording in line 37 makes it seem like a separate topic than the improved flows in line 21. Instead, begin line 37 with something like, “Improved flows through the Yolo Bypass floodplain would be achieved by lowering a portion of the weir and installing and installing and operating a gate facility to benefit covered species. Modifications would improve availability of multi-species fish passage, increase availability of appropriate seasonal floodplain habitat, and would stimulate the food web in the Yolo Bypass and downstream areas. “ Fish passage should be explicitly addressed in the language; it is not at all as written. | address this comment.  |
| 18 | 3-11   | 3.2.2     | 6-10   | Greg Gartrell<br>Contra Costa<br>Water District                  | <p>“To reduce the risk that south Delta exports, under the dual facility operations, result in direct losses or salvage of covered fish or increases in the export of nutrients and food resources produced in restored south and central Delta marshes, the Conservation Strategy includes seasonally adjusted <del>year-round</del> limits on OMR reverse flows.”</p> <p>The operations approved by the Steering Committee do not have year-round restrictions on net flow in Old and Middle River (OMR).</p>  | Text has been modified to address this comment.  |
| 19 | 3-12   | 3.2.3     | 22-23  | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “concentrating on the Cache Slough, <u>West Delta</u> , and Suisun Marsh ROAs....”   | Text has been modified to address this comment.  |
| 20 | 3-12   | 3.2.3     | 25     | Various<br>DWR   | Global replace ‘Salmonids’ with ‘salmonids’ except at beginnings of sentences  | Text has been modified to address this comment.  |
| 21 | 3-12   | 3.2.3     | 28-29  | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “expanded emphasis of habitat to restoration of floodplain and intertidal marsh habitats in the <u>Consumnes-Mokelumne, east, west and south Delta....”</u>  | Text has been modified to address this comment.  |
| 22 | 3-12   | 3.2.3     | 42     | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “ <u>Strategic [i]</u> implementation of conservation measures addressing....”   | Text not modified. Some conservation measures will be implemented globally within the Delta and some strategically to address site |

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|    |        |                    |           |   |  | specific problems.   |
| 23 | 3-17   | 3.3.1              | 17        | Various DWR   | Need to spell out NCCPA the first time it is used in a section as you did for the Habitat Conservation Plans   | Text has been modified to address this comment.                            |
| 24 | 3-17   | All of section 3.3 |           | Greg Gartrell<br>Contra Costa Water District            | The structure of the Goal, Objective and Problem statement throughout section 3.3 does not enhance understanding of the plan. Perhaps the problem statements can be put together creating a background for outlining the goals and objectives. Additionally, the naming convention for goals, objectives, and conservation measure acronyms should be defined before Tables 3.1 and 3.2. | Text has been modified to clarify section structure and intent.            |
| 25 | 3-20   | 3.3.1              | Table 3.1 | Various DWR   | Consider clarifying “appropriate spawning habitat” for Sac. Winter-run since this would include areas above Shasta Dam   | Text has been modified to address this comment.                            |
| 26 | 3-24   | 3.3.1.1            | 10        | Justin Fredrickson<br>California Farm Bureau Federation | “the needs of the covered species are to directed at...”   | Text has been modified to address this comment.                            |
| 27 | 3-24   | 3.3.1.1.           | 10        | Various DWR   | Delete ‘to’  | Text has been modified to address this comment.                            |
| 28 | 3-24   | 3.3.1.2            | 35-43     | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: As an overall comment on draft conservation strategy in general, it might be helpful to include, in an appendix, a glossary of key HCP/NCCP terms of art including, for example, such terms as “recovery,” “conservation,” “enhancement,” “survival,” “mitigation,” etc.</i>   | These and other terms will be included in the BDCP Glossary of BDCP Terms. |
| 29 | 3-24   | 3.3.1.2            | 41        | Various DWR   | You have “covered wildlife and plant covered species” ; need to remove second “covered” after “plant”  | Text has been modified to address this comment.                            |
| 30 | 3-27   | 3.3.1.2            | 3         | Various DWR   | Change “the terrestrial covered species” to “the covered terrestrial species”  | Text has been modified to address this comment.                            |
| 31 | 3-27   | 3.3.2.1            | 19-21     | Various DWR   | The sentence “These problem statements identify the general underlying problem that the conservation measures that are designed to achieve each of the biological objectives associated with each of the goals are intended to address” is extremely difficult to follow it needs some punctuation or needs to be broken down into more than one sentence.                               | Text has been modified to address this comment.                            |
| 32 | 3-28   | 3.3.2.1            | 33        | Various DWR   | And reduced condition factor due to alterations in food supply.  | Text has been modified to address this comment.                            |

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| 33 | 3-29   | 3.3.2.1   | Table  | Various DWR   | Table 3.2 does not have species specific Goals for sturgeon listing improvements in juvenile growth and survival.   | Text not modified. Text describing these goals indicates they are fulfilled by objectives stated under other goals.  |
| 34 | 3-35   | 3.3.2.1   | 1      | Various DWR   | This should include green and white sturgeon.   | Text has been modified to address this comment.  |
| 35 | 3-35   | 3.3.2.1   | 12     | Justin Fredrickson<br>California Farm Bureau Federation | “believed to have direct lethal and sublethal effects on fish species <del>and</del> , as well as possible indirect effects on food web processes that <u>may</u> adversely affect food abundance and availability.”  | Text not modified. Effects on food web processes would be direct to those processes.   |
| 36 | 3-37   | 3.3.5     | 25     | Various DWR   | Stated; ‘this goal include will also...’ Delete <b>include</b>  | Text has been modified to address this comment.  |
| 37 | 3-37   | 3.3.5     | 29-30  | Greg Gartrell<br>Contra Costa Water District            | “Objective GECF1.1: Reduce entrainment mortality of covered fish species <del>at non-project diversions.</del> ”<br><br>To meet the associated goal (GECF1) of increasing the abundance of covered fish species by reducing sources of unnatural mortality, the BDCP should not limit this objective to non-project diversions. Reducing entrainment mortality at <u>project diversions</u> must be an objective of the BDCP. To meet this objective, conservation measures should include installation of positive barrier fish screens at existing and new intake facilities. | Text not modified. Reducing entrainment at project diversions is an avoidance and minimization measure.  |
| 38 | 3-37   | 3.3.5     | 31     | Various DWR   | Consider removing longfin smelt from the list of fish species for this objective. It is unlikely that harvest (bycatch) of longfin is currently a comparable stressor to harvest of the other species listed.   | Text not modified. The Biological Goals and Objectives Working specifically added this species to address suspected illegal harvest of longfin smelt for fishing bait. |
| 39 | 3-38   | 3.3.5     | 5      | Various DWR   | Consider adding another sentence to this objective that addresses the efforts that will be made to minimize adverse effects of reintroducing fish from a refugial population. The goal under which this objective is nested is to “Reduce impacts of hatcheries...”   | Text not modified. The conservation measure for this objective is to fund a refuge, not reintroduce fish   |

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|    |        |           |        |   |  | from the refuge.  |
| 40 | 3-39   | 3.3.6     | 24-25  | Justin Fredrickson<br>California Farm Bureau Federation | <del>When</del> If a spawning population of spring-run Chinook salmon is established in the San Joaquin River <u>in the future, provide for contribute to survival of San Joaquin Basin spring run Chinook salmon rearing in and migrating through the Delta to Chips Island....</u> | Text not modified. The Biological Goals and Objectives Working Group specifically requested this phrasing.  |
| 41 | 3-39   | 3.3.6     | 34-35  | Justin Fredrickson<br>California Farm Bureau Federation | “Vulnerability to poor ocean conditions is believed to increase when Chinook salmon smolts enter the ocean <del>smaller than optimal</del> <u>having achieved a less than optimal level of growth.</u> ”   | Text has been modified to address this comment.   |
| 42 | 3-41   | 3.3.6     | 11-12  | Justin Fredrickson<br>California Farm Bureau Federation | “Vulnerability to poor ocean conditions increases when steelhead smolt enter the ocean <del>smaller than optimal</del> <u>having achieved a less than adequate level of growth.</u> ”  | Text has been modified to address this comment.   |
| 43 | 3-42   | 3.3.6     | 9-10   | Justin Fredrickson<br>California Farm Bureau Federation | “Implementing actions to reduce the effects of these stressors <del>are</del> <u>is</u> expected to maintain....”  | Text has been modified to address this comment.   |
| 44 | 3-42   | 3.3.6     | 23     | Various DWR   | Why is there no Goal/Objective to ‘Increase the abundance or survival of juvenile green sturgeon’?   | Text not modified. The Biological Goals and Objectives Working Group considered such an objective, but believed that for these species this concept was subsumed within the objective to increase the distribution of juveniles within the Planning Area. |
| 45 | 3-42   | 3.3.6     | 28,29  | Various DWR   | It is wrong and inappropriate to imply that sturgeon are misguided by being attracted to floodplain flows. Floodplains were and are a natural  | Text has been modified to more directly address   |

|    | Page # | Section # | Line # | Commenter   | Comment  | Disposition   |
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|    |        |           |        |   | productive component of the Valley hydrologic landscape. There is no scientific literature to support this statement. It is not possible or beneficial to ‘alleviate potential attraction of green sturgeon towards floodplains...’ These statements should not be part of the problem statement. The actions to be stated here need to be to reduce stranding, remove impassable barriers, and prevent entrainment at altered channels. The focus should be to address the problems that we have created. | attraction and stranding of sturgeon into flood bypasses.   |
| 46 | 3-42   | 3.3.6     | 28-29  | Justin Fredrickson<br>California Farm Bureau Federation | “Actions to reduce stranding, <del>remove impassable barriers, or limit the potential adverse effects of migratory barriers</del> and alleviate potential attraction of green sturgeon....”<br><br><i>[Note: The suggested language avoids precluding potential use of barriers in some location, so long as efforts are made to limit potential adverse effects.]</i>   | Text has been modified to address this comment.   |
| 47 | 3-43   | 3.3.6     | 2      | Various DWR   | Why is there no Goal/Objective to ‘Increase the abundance or survival of juvenile white sturgeon’?   | Text not modified. The Biological Goals and Objectives Working Group considered such an objective, but believed that for these species this concept was subsumed within the objective to increase the distribution of juveniles within the Planning Area. |
| 48 | 3-43   | 3.3.6     | 8-9    | Justin Fredrickson<br>California Farm Bureau Federation | “Actions to reduce stranding, <del>remove impassable barriers, or limit the potential adverse effects of migratory barriers</del> and alleviate potential attraction of green sturgeon....”<br><br><i>[Note: The suggested language avoids precluding potential use of barriers in some location, so long as efforts are made to limit potential adverse effects.]</i>   | Text has been modified to address this comment.   |
| 49 | 3-43   | 3.3.6     | 9      | Various DWR   | It is wrong and inappropriate to imply that sturgeon are misguided by being attracted to floodplain flows. Floodplains were and are a natural productive component of the Valley hydrologic landscape. No scientific   | Text has been modified to more directly address attraction and stranding of   |

|    | Page # | Section # | Line # | Commenter                         | Comment  | Disposition  |
|----|--------|-----------|--------|-----------------------------------|--|--|
|    |        |           |        |                                   | literature supports this statement. It is not possible or beneficial to ‘alleviate potential attraction of white sturgeon towards floodplains...’ These statements should not be part of the problem statement. The actions to be stated here need to be to reduce stranding, remove impassable barriers, and prevent entrainment at altered channels like Nights Landing Ridge Cut. The focus should be to address the problems that we have created.   | sturgeon into flood bypasses.  |
| 50 | 3-43   | 3.3.6     | 27,32  | Various DWR                       | Why is there no Goal/Objective to ‘improve the successful migration...’ of this species? ‘Maintaining’ will not improve migration success of this declining species.   | Text is not modified. Intent is to maintain ecological conditions at a level that will support self-sustaining populations. This may or may not include a need to improve migration success.           |
| 51 | 3-44   | 3.3.6     | 1,6    | Various DWR                       | Why is there no Goal/Objective to ‘improve the successful migration...’ of this species? ‘Maintaining’ will not improve migration success of this declining species.   | Text is not modified. Intent is to maintain ecological conditions at a level that will support self-sustaining populations. This may or may not include a need to improve migration success.           |
| 52 | 3-45   | 3.4       | 29     | Various DWR                       | Clarify: what does “operating range limits within which parameters may be implemented to more effectively advance BDCP biological goals and objectives” mean? More effectively than what? Is the language trying to indicate that these are guidelines? A starting point from adaptive management may alter?   | Text is not modified. This is introductory text—intent and purpose of adaptive ranges are described in Section 3.6, <i>Adaptive Management</i> .   |
| 53 |        |           |        | National Marine Fisheries Service | 4. WOCMN8: Refer to NMFS’ comments on the 2-Gates Project, as follows:<br><ul style="list-style-type: none"> <li>• August 11 and 12, 2009, e-mails from Jeff Stuart (NMFS) to Duane Stroup and Mike Chotkowski [U.S. Bureau of Reclamation (Reclamation)], Dan Welsh [U.S. Fish and Wildlife Service (FWS)], and Garwin Yip (NMFS), transmitting comments on the July 21, 2009, draft biological assessment;</li> <li>• August 18, 2009, e-mail from Jeff Stuart (NMFS) to Duane Stroup and</li> </ul> | Text not modified at this time. Emails referenced in the comment are not in the possession of Consultant Team. Request that NMFS forward the referenced emails such that any comments contained within |

|    | Page # | Section # | Line #             | Commenter                         | Comment   | Disposition  |
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|    |        |           |                    |                                   | Mike Chotkowski (Reclamation), Dan Welsh and Victoria Poage (FWS), and Garwin Yip (NMFS), transmitting comments on the August 10, 2009, draft proposed Monitoring Plan Elements; and<br>• August 17, 2009, e-mail from Jeff Stuart (NMFS) to Duane Stroup and Mike Chotkowski (Reclamation), Dan Welsh and Victoria Poage (FWS), and Garwin Yip (NMFS), transmitting comments on the August 10, 2009, draft proposed operations plan.   | may be addressed.  |
| 54 |        |           |                    | National Marine Fisheries Service | 5. The 2-Gates project construction and operations may create additional stressors to anadromous fishes, which were not assessed nor were any reference to such assessments provided. Potential negative impacts from this project include: blocking or delaying green sturgeon from feeding and migration, potentially increasing entrainment of steelhead and fall-run Chinook salmon emigrating from the San Joaquin system, decreasing survival of Sacramento River winter-run and spring-run Chinook salmon migrating though the interior Delta. | Note that 2-Gates Project is expected to be implemented by Reclamation prior to BDCP implementation. Once BDCP is authorized, 2-Gates would be taken on as a BDCP conservation measure. Effects of BDCP implementation on covered species and supporting ecosystem process and natural communities will be addressed in Chapter 5, <i>Effects Analysis</i> . |
| 55 |        |           |                    | National Marine Fisheries Service | 6. 2-Gates studies and model results referencing environmental benefits needed to be cited.   | Text has been modified to address this comment.  |
| 56 | 3-46   | 3.4       | Table 3.3; WOC MN8 | Various DWR                       | “Two Gates” benefits are very questionable. A review of the “Two Gates” proposal and ‘Biological Assessment’ raises more questions and doubts than they answer. The documents on this project makes assertions that cannot be support, qualifies the stated benefits to be from 3 of 5 modeling runs, and has been countered by independent analysis (Overview of Proposed 2-Gate Project and Merits of Adoption by the Dept. of Water Res. 2008).  | Note that 2-Gates Project is expected to be implemented by Reclamation prior to BDCP implementation. Once BDCP is authorized, 2-Gates would be taken on as a BDCP conservation measure. Text has been modified to address this comment. The 2-Gates  |

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|    |        |           |                    |   |  | project as described in the chapter has been revised to reflect more recent evaluation results that indicate benefits are more focused on turbidity and adult smelt rather than young smelt.                           |
| 57 | 3-46   | 3.4       | All of Section 3.4 | Greg Gartrell<br>Contra Costa Water District            | Conservation Measure Acronyms. The fact that the conservation measures are not presented in numerical order (WOCMN starts with 12) is somewhat confusing. The naming convention should be described at the start of the section, with explanation that the numbers do not represent an implementation order or any priority, but rather serve as a unique identification for each conservation measure. Is the naming convention consistent with the DRERIP analysis? If not, can the acronyms be renamed so that they are numbered in the order in which they appear? | Text has been modified to address this comment. As noted in lines 3-8 on page 3-50, convention shown in this draft of Chapter 3 was to maintain tracking to past draft document versions of the conservation measures. |
| 58 | 3-46   | 3.4       | All of Section 3.4 | Greg Gartrell<br>Contra Costa Water District            | Adaptive Management Considerations ~ section within each conservation measure needs to be more specific for each conservation measure.   | Text of these sections has been modified to address this comment.  |
| 59 | 3-50   | 3.4       | 1                  | Various DWR   | This section should be moved to the front. It seems backward in a complex, long term, and ignorant program to make select set measures (actions) take the lead and have 'Adaptive Management' as a minor (page 3-50) consideration.  | Text not modified. The discussion of adaptive management throughout Chapter 3 indicates that it is not a minor consideration, but rather the framework within which the entire Plan will be implemented.               |
| 60 | 3-50   | 3.4       | 34-35              | Justin Fredrickson<br>California Farm Bureau Federation | "the Delta Vision Program; <u>existing scientific literature</u> ; various <del>plan</del> <u>planning</u> and technical documents...."  | Text has been modified to address this comment.  |
| 61 | 3-50   | 3.4       | 37                 | Justin Fredrickson                                      | Re: "state-of the art physical models."  | Text has been modified to address this comment.  |

|    | Page # | Section # | Line # | Commenter   | Comment   | Disposition   |
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|    |        |           |        | California Farm Bureau Federation                       | <i>Comment: What does this refer to? Computer models? We are not talking about actual physical models, right? Is there a better way to say this?</i>  |   |
| 62 | 3-51   | 3.4       | 13     | Justin Fredrickson<br>California Farm Bureau Federation | “conservation measures were evaluated individually <u>by a large and diverse group of experts</u> to assess their benefits and drawbacks...”  | Text has been modified to address this comment.   |
| 63 | 3-52   | 3.4.1     | 32     | Justin Fredrickson<br>California Farm Bureau Federation | “... floodplain habitat, and other important biological mechanisms. Today, because of <u>upstream regulation of flows and because of the Delta’s highly modified hydrology, such natural cues are often muted and asynchronous from biological standpoint. The overall intent of the BDCP’s water operations conservation measures is to functionally re-establish and approximate such natural patterns, to the extent possible, while still achieving the BDCP’s water supply reliability objectives.</u> ” | Text has been modified to address this comment.   |
| 64 | 3-52   | 3.4.1     | 33     | Greg Gartrell<br>Contra Costa Water District            | There is no requirement for unidirectional flow past a screened intake. Designed properly, positive barrier fish screens are highly effective in a tidal environment. CCWD’s Old River intake is an excellent example; flows in this region of the Delta are strongly tidal, reversing direction approximately every 6 hours, yet monitoring at the intake confirms that the fish screens are highly effective (catching only one delta smelt in 11 years of operation).                                      | Text not modified. Text indicates unidirectional flow is a consideration related to the degree of screen effectiveness. |
| 65 | 3-53   | 3.4.1     | 5-8    | Justin Fredrickson<br>California Farm Bureau Federation | “The BDCP Conservation Strategy proposed two types of water operations conservation measures: (1) construction of new operational control facilities, and (2) <u>proposed</u> operations of <u>such</u> new operational control facilities or changes to the operations of existing operational control facilities...”  | Text not modified. Text indicates in this version that the measures are “proposed”.                                     |
| 66 | 3-53   | 3.4.1     | 19-22  | Greg Gartrell<br>Contra Costa Water District            | “relatively broad agreement within the fisheries conservation community” is an inappropriate characterization, considering that FWS has informed the Steering Committee multiple times that the proposed operations would likely lead to a jeopardy opinion for delta smelt, a species that the BDCP seems to imply will benefit from the new operations. Taking this into consideration, it seems incorrect to list the new intakes, conveyance, and operating criteria as conservation measures.            | Text not modified. Text is appropriate in context and as modified by following sentence.                                |

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| 67 | 3-53   | 3.4.1     | 24-28   | Justin Fredrickson<br>California Farm Bureau Federation | “Determining the appropriateness of the isolated facilities, therefore, considers the operational parameters <del>that will govern it</del> and the various <u>physical components of the facilities themselves</u> as much as the reliability of the governance structures that will apply those parameters. Hence, <del>distinguishing clearly</del> <u>clearly distinguishing</u> the design features of any new facilities from their operational features is important for an accurate appraisal of the merits of the measures <u>as a whole...</u> ” | Text has been modified to address this comment.   |
| 68 | 3-54   |           |         | Various DWR   | No sizes on Fremont Weir gates of the new intakes  | Engineering studies are underway to determine the necessary size and appropriate location of the notch and gates to meet the flow objectives identified.  |
| 69 | 3-54   | 3.4.1.1   | 12      | Various DWR   | Reformat Figure 3.4 (referred to here) to be clear so that the reader may better see what is being discussed in this section.  | Graphic will be modified as necessary for clarity.  |
| 70 | 3-54   | 3.4.1.1   | 24      | Various DWR   | IFF supported by BDCP, consider documenting that Sacramento Weir operable gates could serve as an alternative to, or could supplement, Fremont Weir operable gates. USBR and DWR Flood Management staff, as well as others, have indicated this should be explored further. It is understandable if documentation of this possibility does not occur until a subsequent draft that may include additional actions such as those identified to have potential for near term implementation.   | No proposal has been made to date within the BDCP process to evaluate the Sacramento Weir as an option to the Fremont Weir conservation measure. This proposal will be considered and evaluated for potential benefits. |
| 71 | 3-55   |           |         | Various DWR   | The TBD on near term ops leaves us little to comment on.   | Consultant Team proposed near term operations were provided as a separate proposal after the July 27 draft of Chapter 3. Comments on that separate document are welcome.  |
| 72 | 3-55   | 3.4.1.1   |         | Various DWR   | Figure 3.4 base map is not clear and is unreadable.  | Graphic will be modified as necessary for clarity.  |
| 73 | 3-55   | 3.4.1.1   | Fig 3.4 | Greg Gartrell<br>Contra Costa                           | Missing the “Deep Water Ship Channel Bypass Operable Gates”. Additionally, the background map is illegible.  | Figure not modified.<br>Conservation measure  |

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|    |        |           |                        | Water District  |  | HRCM17 is not a water operations measure and only proposes assessing feasibility of a Deep Water Ship Channel.                                     |
| 74 | 3-56   | 3.4.1.2   | 3                      | Various DWR   | (WOCMN)- It would be beneficial to the reader if an “ACRONYMN DEFINITION TABLE” were included in the beginning of this document. Perhaps after the Table of Contents Index. There are so many new acronyms introduced by this document it is hard to understand what is being said if you are reading a specific section, independent from the rest of the document. A table that defines all the acronyms used within the document (old and new acronyms) is a widely used EIR/EIS and Functional Equivalent Document (FED) writing practice.   | A BDCP acronym list is in preparation and will be provided to the Steering Committee.  |
| 75 | 3-56   | 3.4.1.2   | 9+<br>Entire WOC MN1 2 | Greg Gartrell<br>Contra Costa Water District            | <p><b><u>“WOCMN12: Operate South Delta diversions to maintain sufficient Old and Middle River Flows reduce entrainment at the South Delta export facilities and to reduce the risk of predation within Clifton Court Forebay during the near-term implementation period for environmental benefits.”</u></b></p> <p>The language “maintain sufficient Old and Middle River Flows” is inaccurate and misleading. Net flow on Old and Middle River, together with fish distribution information from field surveys and fish salvage reports at the export facilities, are metrics that the BDCP Implementing Entity will use to guide operation of the South Delta facilities.</p> | Text not modified. The operations criteria for this measure are Old and Middle River flows.  |
| 76 | 3-56   | 3.4.1.2   | 9                      | Justin Fredrickson<br>California Farm Bureau Federation | <u>General comment:</u> CMs through draft conservation strategy are not sequential and skip around. This creates some confusion for the reader in terms of navigation through the document. Will CMs in final conservation strategy follow some a clear numeric sequence?  | As described in note to reviewers on page 3-52, CM nomenclature was carried forward in this version from previous CM drafts for tracking purposes. |
| 77 | 3-56   | 3.4.1.2   | 10                     | Justin Fredrickson<br>California Farm Bureau Federation | <u>Operational limits on [m]M</u> Maximum Old and Middle River reverse flows....”  | Text has been modified to address this comment.  |

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| 78 | Page 3-56     |                  | 2 <sup>nd</sup> paragraph | Mike Ford<br>DWR<br>Operations<br>Control Office                 | Reverse flows in Old and Middle Rivers are also significantly affected by local agricultural diversion rates (e.g. channel depletion) in the south Delta in addition to San Joaquin River flows, tides and CVP/SWP exports that are already mentioned. The paragraph should also reflect (which it presently doesn't) that largely due to tidal fluctuations and local ag diversion rates, reductions in CVP/SWP exports may still not result in meeting OMR targets set to protect fish species.   | Text has been revised to clarify factors affecting flows.   |
| 79 | 3-56          | 3.4.1.2          | 13                        | Greg Gartrell<br>Contra Costa<br>Water District                  | This characterization of flow in Old and Middle Rivers (OMR) is confusing. Old and Middle River are tidal channels, flows naturally reverse in this area approximately every six hours. Low San Joaquin River inflow and High SWP/CVP export pumping may alter the instantaneous flows in OMR, increasing the flow on the flood tide and reducing the flow on the ebb tide (sometimes, completely eliminating the ebb tide). The net (daily average) result is a reduction in downstream (northerly) flow, often resulting in a net upstream (southerly) flow in this region. | Text has been revised to clarify factors affecting flows.   |
| 80 | 3-56          | 3.4.1.2          | 13-14                     | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “These rivers are subject to reduced or reverse flows <u>at various times of the year</u> as a result of low San Joaquin River inflow, flood tides, and water exports....”  | Text has been modified to address this comment.   |
| 81 | 3-56          | 3.4.1.2          | 20-21                     | Various<br>DWR   | Reader wonders how agreement will be reached on near-term operational criteria – if process is known, it would be helpful to describe.  | Consultant has proposed near term operational criteria model inputs and SC has approved the evaluation of those operational criteria. Results of modeling of these inputs will be reviewed and used, along with other effects evaluation results to assess the need for modification of these criteria or development of new criteria through the existing BDCP |

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|    |        |           |        |   |  | SC process.  |
| 82 | 3-56   | 3.4.1.2   | fn. 3  | Justin Fredrickson<br>California Farm Bureau Federation | “range of parameter values <del>around the</del> and operational criteria within which water operations may be conducted....”  | Text has been modified to address this comment.  |
| 83 | 3-57   | 3.4.1.2   | 4-7    | Greg Gartrell<br>Contra Costa Water District            | “... there is a positive relationship between the <u>net (monthly average) magnitude (average monthly)</u> of reverse flows within Old and Middle Rivers and the occurrence of pre-spawning adult delta smelt in SWP and CVP fish salvage during the winter months (Kimmerer 2008, USFWS 2009).”   | Text has been modified to address this comment.  |
| 84 | 3-57   | 3.4.1.2   | 14-15  | Greg Gartrell<br>Contra Costa Water District            | <p>“Reverse flows in Delta channels are thought to contribute to false attraction to migration cues ...” There is no basis for this statement. As stated previously, the Delta is a tidal environment with bidirectional flows, naturally reversing direction approximately every 6 hours. If you are discussing the NET reverse flow caused by the SWP/CVP pumps in this regions, it is inconceivable how fish would react to a net daily average flow (a mathematical construct); fish experience the instantaneous flow, which, again, reverses naturally in this region. The flow in the river is equal to the net flow for just an instant a few times a day. This is not a cue that a fish can get.</p> <p>The reverse salinity gradient, created by high salinity water from the San Joaquin River, however, is such a cue and is ignored. Why?</p> | Text will be revised to clarify the relationships.   |
| 85 | 3-57   | 3.4.1.2   | 19-26  | Greg Gartrell<br>Contra Costa Water District            | <p>This paragraph implies that lower trophic productivity is limited by current pumping in the South Delta and that productivity should increase as a result of decreasing pumping. There have been extensive studies showing that there are other factors limiting productivity in the Delta, including clams and high turbidity/low light conditions. If there is new information indicating that the export of primary and secondary productivity is a limiting factor affecting ecosystem health this should be brought to light.</p> <p>Additionally this assumes that there is more productivity lost in the South Delta than there would be where the new pumps would be</p>  | Text not modified. Text indicates that there are hypothesized relationships between reverse flows and productivity only in context of this conservation measure. |

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|    |           |           |                           |   | located, a claim that is not substantiated with references or quantitative measures in the text.<br><br>Increasing residence time in the south delta may also increase exposure to agricultural runoff and increased exposure to toxins and excessive nutrients would certainly not benefit the ecosystem.  |  |
| 86 | 3-57      | 3.4.1.2   | 23                        | Various DWR   | Revise to read as follows, “Channel velocities, scour, and deposition patterns, affect habitat for benthic organisms and other macroinvertebrates”  | Text has been clarified to address this comment.                       |
| 87 | 3-57      | 3.4.1.2   | 33                        | Justin Fredrickson<br>California Farm Bureau Federation | “Hypotheses: Reducing diversions in the South Delta <del>are</del> <u>is</u> hypothesized to....”   | Text has been modified to address this comment.                        |
| 88 | Page 3-58 |           | 2 <sup>nd</sup> paragraph | Mike Ford<br>DWR<br>Operations Control Office           | It should be noted that the Delta cross channel gates are CVP facilities, not SWP, and, as such, USBR has the ultimate authority to determine how the cross channel gates are operated, not DWR.  | Text not modified. Governance of BDCP operations is under development. |
| 89 | 3-58      | 3.4.1.2   | 22                        | Greg Gartrell<br>Contra Costa Water District            | Operational criteria (not yet developed) should include possible diurnal operation of the gates. Diurnal operation has been hypothesized to protect outmigrating salmon along the Sacramento River while providing water quality benefits for the interior Delta. With the DCC gates closed, during time periods with low San Joaquin River flow, the residence time in the central and south Delta increases, leading to warmer temperatures and the build-up of contaminants that are potentially detrimental to the ecosystem. | Text not modified. Operational criteria are under development.         |
| 90 | 3-58      | 3.4.1.2   | 24                        | Greg Gartrell<br>Contra Costa Water District            | “Problem Statement: When the Delta Cross Channel is open, fish <u>may</u> move into the interior Delta <del>with Sacramento River water.</del> ”<br><br>Recent research indicates fish do not simply move with the flow; the split of fish at junctions often does not correspond to the flow split.  | Text has been modified to address this comment.                        |
| 91 | 3-58      | 3.4.1.2   | 26                        | Various DWR   | Stated; ‘within the interior Delta is lower than survival in the mainstem’... This <b>likely</b> should not be applied to all species. Sturgeon need access to the Central Delta as a nursery since they need to reside in the Delta for two to four years.   | Text has been clarified to address this comment.                       |

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| 92 | 3-58   | 3.4.1.2   | 33-35  | Justin Fredrickson<br>California Farm Bureau Federation | <p>Re: “However, adverse effects of an open DCC operation to anadromous fish, and other fish, also occur outside of this closure period....”</p> <p><i>Comment: Aside from potential conflicts with North Delta operations and, perhaps, downstream transport of productivity, the rationale for why opening DCC gates in June or after August would be a problem is not well (that is, not meaningfully or convincing) explained in the text. Please explain the factually basis for this statement.</i></p>   | Text has been clarified to address this comment.  |
| 93 | 3-58   | 3.4.1.2   | 35-39  | Greg Gartrell<br>Contra Costa Water District            | <p>Increased closure of the DCC gates is likely to impact juvenile salmonids emigrating from the Mokelumne and Consumnes River systems. Since closure of the DCC gates reduces net flow on the lower Mokelumne system, it is likely that survival on these reaches is also reduced; this hypothesis is based on results from a pilot study of salmon outmigration in the North Delta (see Burau et. al. 2007. Sacramento/San Joaquin River Delta Regional Salmon Outmigration Study Plan: Developing Understanding for Management and Restoration) that indicated survival of juvenile salmonids decreased with decreasing net flow.</p> <p>Furthermore, some emigrating steelhead smolts are known to outmigrate through the DCC and down the Sacramento River; extended DCC closures would reduce potential use and increase mortality for this migratory pathway.</p> <p>For these reasons, the BDCP should not extend DCC closures beyond what has been specified by NMFS in the 2009 OCAP BO RPAs. To conform the proposed operations to the current NMFS BO, the DCC gates should be open for a minimum of 16 days from May 15 to June 15, and open from June 15 until fish are present in October.</p> | Text not modified. Operational criteria are under development. Potential effects of this measure on biological resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> . |
| 94 | 3-59   | 3.4.1.2   | 1      | Justin Fredrickson<br>California Farm Bureau Federation | <p>“their risk to <del>of</del> predation and <u>from</u> other sources of mortality....”</p>   | Text has been modified to address this comment.   |

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| 95  | 3-59      | 3.4.1.2   | 10   | Justin Fredrickson<br>California Farm Bureau Federation | “leading to longer exposure to <u>unfavorable</u> environmental conditions....”  | Text has been modified to address this comment.   |
| 96  | 3-59      | 3.4.1.2   | 26-28  | Justin Fredrickson<br>California Farm Bureau Federation | “ <b>Adaptive Management Considerations:</b> Results of biological monitoring could be within the BDCP adaptive management framework to refine and modify seasonal operations of Delta Cross Channel gates, <u>including, for example, potential patterns relating to diurnal and nocturnal movement of fish.</u> ”  | Text has been modified to address this comment.   |
| 97  | Page 3-59 |           | 5 <sup>th</sup> paragraph (Rio Vista flows ) | Mike Ford<br>DWR Operations Control Office              | The description identifies that diversions of water into the Delta cross-channel and into floodplain habitat can reduce the remaining flow of Sacramento River past Rio Vista but makes no mention of other lower Sacramento diversions (municipal and agricultural) that can also affect Rio Vista flows. This omission should be corrected.  | Text not modified. Text is directed at describing relationships of proposed operations only to flow.  |
| 98  | Page 3-60 |           | (Adaptive Management Considerations)         | Mike Ford<br>DWR Operations Control Office              | The limitations of travel time of releases from CVP and SWP reservoirs should also be acknowledged.  | Text not modified. Conformance with criteria may affect releases, but releases would not in and of themselves result in adaptive changes.                     |
| 99  | 3-60      | 3.4.1.2   | 26   | Various DWR   | Stated; ‘...to reduce entrainment of...into Old and Middle Rivers’... It is bias and wrong to use entrainment like this. It is not entrainment if fish enter a natural waterway or area of the Central Delta. Entrainment happens at the SWP and CVP facilities. It should be assumed that if we block access of sturgeon juveniles to a significant portion of the Delta a significant portion of their historic nursery grounds will not be accessible, and this could lead to a negative population impact. This facility will impede the natural movements of juvenile salmonids and sturgeon. | Text will be modified to clarify the meaning of entrainment and the differences in expected ecological effects of this action between sturgeon and salmonids. |
| 100 | Page      |           | last   | Mike Ford   | The paragraph implies that only SWP and CVP diversion affect reverse   | Text not modified. The text   |

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|     | 3-60   |           | parag<br>raph<br>(Probl<br>em<br>State<br>ment) | DWR<br>Operations<br>Control Office                              | flows in Old and Middle River. Again, tidal conditions and agricultural diversions in the south Delta also play significant roles in the magnitude and frequency of OMR reverse flows and these factors should be acknowledged as such.  | is directed at only addressing the contribution of SWP and CVP operations.   |
| 101 | 6-61   | 3.4.1.2   | 8   | Various<br>DWR   | The hypotheses are selectively excluding the hypothesized effects to salmonids and to sturgeon. The effects on both of these species, both strong swimmers for their sizes, will most likely be negative. Analysis by DWR of the effects and efficiencies of 2-Gates in (Overview of Proposed 2-Gate Project and Merits of Adoption By the Dept. of Water Res. 2008. Administrative Draft) found that the benefits to delta smelt are questionable. Analysis done by the proponents of 2-Gates was not able to show any benefits to other species and qualified their assumption to come out of three of five modelings.           | The 2-Gage Project is being separately developed and analyzed by Reclamation. Should it be implemented on its proposed schedule, it would be part of existing conditions under the BDCP. |
| 102 | 3-61   | 3.4.1.2   | 31-33   | Greg Gartrell<br>Contra Costa<br>Water District                  | The discussion regarding Delta outflow and salinity is missing a discussion of the effect of salinity on the distribution of invasive clams that have a dominant effect on the food web. The effect of salinity on <i>Corbula</i> is well established (USGS has observed the spread of <i>Corbula</i> up river with a change in fall water export schedules); and the effect of <i>Corbula</i> on phytoplankton in the estuary is well documented. These relationships should be taken into account when modifications to the salinity regime (via change to Delta outflow) are considered. For more discussion, see comment 25.   | Text has been modified to address this comment.  |
| 103 | 3-61   | 3.4.1.2   | 33-34   | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | Re: "The abundance of life stages of a number of fish species, including covered species (longfin smelt), has been positively correlated with the location of the low salinity zone (generally measured as X2) within the estuary (Baxter et al. 1999, Kimmer 2004). <u>While the relationship between fish abundance and the location of the low salinity zone has weakened over time, and particularly since the introduction of <i>Corbula amurensis</i> in 1986, it nonetheless appears that Delta outflow and the relative location of the low salinity zone within the estuary remain a relevant biological parameter.</u> " | Text has been modified to address this comment.  |
| 104 | 3-62   |           |   | Various<br>DWR   | WOCMN14: another exception should be added to limit the D1641 standard during periods when meeting it would cause the projects to  | There will be new Biological Opinions issued   |

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|     |        |           |                                  |   | violate the OCAP BOs and the associated RPAs.  | for BDCP that would replace parts of the OCAP Biological Opinions, therefore the BDCP Conservation Strategy if authorized by FWS and NMFS would by definition meet the Section 7 requirements. The BDCP EIR/EIS is being prepared to serve the needs of the State Water Resources Control Board such that the Board may address the BDCP proposed plan as necessary. |
| 105 | 3-62   | 3.4.1.2   | 17-25                            | Various DWR                                     | Revise this paragraph made up of one long continuous sentence, into two sentences... it will read better.  | Text has been modified to address this comment.  |
| 106 | 3-62   | 3.4.1.2   | 31-35                            | Greg Gartrell<br>Contra Costa<br>Water District | Adaptive management allows revision of Delta outflow criteria by addressing other stressors. However, this does not seem justified; other stressors do not address the specified hypotheses/need for Delta outflow (downstream transport of fish and organic material).  | Text not modified. Text simply is providing examples of the bases upon which adaptive changes may be implemented.  |
| 107 | 3-62   | 3.4.1.2   | 38+<br>entire<br>WOC<br>MN1<br>4 | Greg Gartrell<br>Contra Costa<br>Water District | Please be specific regarding which water quality standards will be maintained. As the plan currently reads, it appears that the South Delta water quality standards for M&I beneficial use at the export facilities and the standards for agricultural beneficial use, all of which are required by D1641, will be dropped. What about the Rock Slough M&I water quality standard required both in D1641 and in Federal law (PL 99-546, enacted October 27, 1986, approving the Coordinated Operations Agreement between the Bureau of Reclamation and the Department of Water Resources)?<br><br>Numerous regulatory policies and federal and state laws are intended to prevent degradation of water quality, seriously constraining, if not | Text not modified. The text indicates the water quality standards that would be maintained under this conservation measure. BDCP will need to affect appropriate changes in existing regulations that may be necessary to implement this conservation measure.   |

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|     |        |           |        |   | <p>outright prohibiting, the relaxation of water quality standards. To the extent that the BDCP is proposing to relax or completely abandon any water quality standards, the document must acknowledge the legal and regulatory constraints; a complete description of legal and regulatory issues should be written the appropriate Chapter with a summary and reference here.</p> <p>Additionally, any proposals to change current water quality standards must be thoroughly evaluated and, regardless of whether such changes are assumed to be lawful, the impacts on all beneficial uses of Delta water must be fully disclosed.</p>   |   |
| 108 | 3-62   | 3.4.1.2   | 39-40  | Greg Gartrell<br>Contra Costa<br>Water District | <p>Moving the D-1641 compliance point from Emmaton to the Three Mile Slough juncture is likely to increase salinity in the Delta, which may be detrimental to the food web.</p> <p>There is a strong relationship between salinity and the distribution of the invasive clam species <i>Corbula</i> and <i>Corbicula fluminea</i>, with <i>Corbula</i> dominating higher salinity water and <i>Corbicula fluminea</i> dominating freshwater. Shifting the saltwater-freshwater interface landward is likely to expand the distribution of <i>Corbula</i> while possibly reducing the spatial distribution of <i>Corbicula fluminea</i>.</p> <p><i>Corbicula fluminea</i> has been present in the estuary since the 1940s; however, since <i>Corbula</i> invaded in the mid-1980s, phytoplankton levels have dropped significantly, indicating <i>Corbula</i> has a more severe impact on the food web than <i>Corbicula fluminea</i>, an observation that is supported by literature on the grazing rates of each species (<i>Cobula</i> grazes over 5 times more water volume in a day, per gram of biomass, than <i>Corbicula fluminea</i>).</p> <p>Therefore, increasing salinity is likely to further reduce primary production in the estuary. This effect must be evaluated and fully disclosed in Chapter 5 (Effects Analysis).</p> | Text not modified. Potential effects of this measure on biological resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> . |
| 109 | 3-62   | 3.4.1.2   | 41-42  | Justin<br>Fredrickson                           | <p>“Operations under WOCMN5, 11, and 12 could affect this parameter, <u>which also has relevance in relation to existing and future water quality</u></p>  | Text not modified. BDCP will need to affect   |

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|     |        |           |        | California Farm Bureau Federation                       | <u>standards set by the State Water Resources Control Board. It should be noted, therefore, that the BDCP's near-term water operations conservation measures will need to balance and reconcile intended environmental and water supply reliability benefits, on one hand, and on-going in-delta water quality requirements, on the other.</u>   | appropriate changes in existing regulations that may be necessary to implement this conservation measure.   |
| 110 | 3-63   |           |        | Various DWR   | The Adaptive limits may also be in violation of D1641, so this should be recognized. Additionally, Greg Gartrell has repeatedly express that Rock Slough salinity is also controlled through Public Law in addition to D1641. This should be expressed here.   | The BDCP EIR/EIS is being prepared to serve the needs of the State Water Resources Control Board such that the Board may address the BDCP proposed plan as necessary. |
| 111 | 3-63   | 3.4.1.2   | 1-2    | Justin Fredrickson<br>California Farm Bureau Federation | <u>Note: There is currently no Table 3.4 in the current draft conservation strategy to show proposed near-term operations.</u>   | A template of the intended table is presented on page 3-56. The table information will be provided when criteria have been drafted.                                   |
| 112 | 3-63   | 3.4.1.2   | 12-15  | Justin Fredrickson<br>California Farm Bureau Federation | <u>"Hypotheses: Maintaining existing D-1641 North and Western Delta agricultural and municipal and industrial (M&amp;I) standards and all water quality requirements contained in the North Delta Water Agency/DWR Contract and other DWR contractual and water rights-related obligations would permit allow existing agricultural and M&amp;I uses of water in these areas throughout most or all of the Delta. In addition, DWR and USBR have obligations to meet existing, non-contractual M&amp;I and agricultural objectives in the central and south Delta under the Porter-Cologne Act and the State Water Resources Control Board's Water Rights Decision 1641. These and any similar water quality standards or requirements pertaining to the central and south in future will remain relevant to overall BDCP implementation."</u> | Text not modified. BDCP will need to affect appropriate changes in existing regulations that may be necessary to implement this conservation measure.                 |
| 113 |        |           |        | National Marine Fisheries Service                       | 9. WOCMN11 (p. 3-63): Suisun Marsh Salinity Control Gates. This could be a significant change to the ecology of the Suisun Marsh since it would change from predominately freshwater to saltwater system, which is not a goal of the current Suisun Marsh Habitat Plan.<br>In the August 2008 biological assessment for the long-term operations of the Central Valley Project and State Water Project, Reclamation  | Text not modified. Potential effects of this measure on biological resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> .               |

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|     |        |           |        |  | proposed to keep the boat lock portion of the gate open at all times during SMSCG operation.   |   |
| 114 |        |           |        | National Marine Fisheries Service            | 10. WOCML1 (p 3-64). New water diversions in north Delta, construction impacts, long-term reduction in flows could cause major changes to anadromous species by reducing survival (multiple fish screen contacts), reducing migratory triggers (flow magnitude and timing), reducing freshwater flows to the ocean, and reducing dilution of pollutants from wastewater treatment plants and agricultural drainages. | Text not modified. Potential effects of this measure on biological resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> .   |
| 115 | 3-64   |           |        | Various DWR                                  | On all of these descriptions, the term “or functional equivalent” would be useful if added. Telling the DHCCP folks exactly where to put things may tie our hands in appropriately.  | Text not modified. Text reference not understood. If this comment is directed to the proposed new north Delta conveyance facilities described on pg 3-65, text will be modified in subsequent versions to reflect most current description of the facilities provided by DHCCP. |
| 116 | 3-64   | 3.4.1.2   | 7      | Various DWR                                  | Another hypotheses should be added, to;<br>Improve the productivity and quality of aquatic food production in the area by increasing the salinity in the slough and allowing natural flushing.   | Text has been modified to address this comment.   |
| 117 | 3-64   | 3.4.1.3   | 40     | Greg Gartrell<br>Contra Costa Water District | According to the operations approved by the Steering Committee for analysis, the north Delta facilities will not always be operated <b>preferentially</b> over the South Delta facilities. As recognized in other areas of the document, maintaining pumping in the South Delta in the summer and fall is necessary to prevent the build-up of contaminants that are toxic to a many species.                        | Text not modified. This comment is acknowledged on pg 3-66, lines 3-7.  |
| 118 | 3-65   |           |        | Various DWR                                  | Thank you for not including cylindrical screens.   | Text not modified. Comment does not call for modification.  |
| 119 | 3-65   | 3.4.1.3   | 35-41  | Justin Fredrickson<br>California Farm        | “ <u>Although the final alignment of an isolated facility will be determined in the BDCP’s on-going CEQA/NEPA review, Aa 49-mile isolated conveyance facility is proposed, for purposes of this discussion, to be</u>  | Text not modified. This conservation measure is currently part of the draft   |

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|     |        |           |        | Bureau Federation                                       | routed along the eastern side of the Delta from the intakes to a new 730-acre forebay near Clifton Court Forebay (Figure 3.4). Five pump stations will lift water from the five intakes into the isolated conveyance facility. <u>Such a</u> conveyance facility <del>will</del> <u>would</u> be primarily above ground but <del>will</del> <u>would</u> take the conveyance facility under existing waterways. Because <del>the</del> <u>such</u> conveyance facility <u>would</u> cross multiple roads and railroads, 19 new bridges will be constructed. The new forebay <del>will</del> <u>would</u> tie directly to existing south Delta CVP and SWP facilities....”  | proposed action. All information and proposed actions contained in draft BDCP documents are “for the purpose of this discussion” until actions are specifically proposed in the permit applications. |
| 120 | 3-66   | 3.4.1.3   | 1-7    | Justin Fredrickson<br>California Farm Bureau Federation | “Although construction of the new north Delta facility and associated infrastructure <del>will</del> <u>would</u> be 1 initiated in the near-term, operation of the new facility <del>will</del> <u>would</u> not start until the long-term 2 implementation period. <u>Except during summer months [see WOCML#] and at other times where 4 necessary to meet the goals of fish conservation and water supply),</u> <del>the</del> north Delta diversion facility will be operated in conjunction with, 3 but preferentially to <del>(except during summer months [see WOCML#] and at other times where 4 necessary to meet the goals of fish conservation and water supply),</del> existing south Delta SWP 5 and CVP diversion facilities to minimize adverse effects on fish in the Delta while maintaining 6 water supply reliability as described in Chapter 4 <i>Covered Activities.</i> ” | Text has been clarified to address this comment.   |
| 121 | 3-66   | 3.4.1.3   | 16-17  | Greg Gartrell<br>Contra Costa Water District            | First sentence of the paragraph is misleading ~ bypass flows are only required when the diversions are operating.  | Text has been clarified to address this comment.   |
| 122 | 3-66   | 3.4.1.3   | 16-29  | Justin Fredrickson<br>California Farm Bureau Federation | “These north Delta facilities ‘bypass flows’ represent the rate of flow at which the Sacramento 16 River must pass downstream of the new diversion points. Bypass flows are intended to serve as 17 <del>an</del> operational parameters to limit or otherwise manage water diversions from the new north 18 Delta diversion facilities to minimize and reduce the effects of those diversions on downstream 19 hydrodynamics (e.g., reduce Sacramento River flow downstream of the point of diversion) 20 needed to support functions within and downstream of the river. Bypass flows for the 21 Sacramento River <del>act</del> <u>serve</u> as <del>an</del> operational criteria <del>in</del> <u>under</u> which water diversions will only occur when 22 flows are maintained above the minimum criteria.   | Text has been clarified to address this comment.   |

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| 123 | 3-66   | 3.4.1.3   | 27-28  | Greg Gartrell<br>Contra Costa<br>Water District                  | According to DFG, the preference of South Delta pumping in the summer months came out of the DRERIP analysis, citing concerns for toxic build-up. Therefore, this sentence should be modified by replacing “maintain water quality in the South Delta” with “limit accumulation of toxics in the South Delta”. | Text not modified. As indicated on pg 3-66, ln 39, this conservation measure also affects measures related to maintaining a broader suite of water quality constituents than just toxics. |
| 124 | 3-66   | 3.4.1.3   | 29     | Greg Gartrell<br>Contra Costa<br>Water District                  | Listing “up to 3000 cfs” as the operational criteria for WOCML## is meaningless. This criteria would technically permit 0 cfs of preferential pumping, which would provide no benefit to the ecosystem.  | The text has been modified to reflect that long-term operational criteria have not yet been established.  |
| 125 | 3-66   | 3.4.1.3   | 30-31  | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “In addition to establishing the minimum bypass flow rates as one set of operating criteria, two 30 additional operating criteria will be implemented <u>in response</u> to low river flow conditions.”  | Text has been modified to address this comment.   |
| 126 | 3-66   | 3.4.1.3   | 41     | Greg Gartrell<br>Contra Costa<br>Water District                  | Is it really feasible to operate the pumps on a tidal timescale? Currently, it is not used as an option to control net flow in Old and Middle River so it is not clear why that strategy would be more feasible in the future.   | Text not modified. This is a proposed future action.  |
| 127 | 3-67   | 3.4.1.3   | 4-6    | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “changes in the biological processes and relationships <del>in response to river flow</del> that occur 4 seasonally <u>in response to river flow</u> (e.g., differences in the biological processes of phytoplankton and zooplankton 5 production between winter-spring and summer-fall). . . .”               | Text has been modified to address this comment.   |
| 128 | 3-67   | 3.4.1.3   | 7-38   | Greg Gartrell<br>Contra Costa<br>Water District                  | If these are known relationships, more detail on each relationship should be given within the report (perhaps a different section).  | Text not modified. Text presents a recounting of the factors considered in the formulation of bypass flows.   |
| 129 | 3-67   | 3.4.1.3   | 13     | Various<br>DWR   | Consider removing “...first feeding [sic]...” First feeding for smelt often occurs in the Cache Slough/upper estuary.  | Text has been modified to address this comment.   |
| 130 | 3-67   | 3.4.1.3   | 17     | Various<br>DWR   | Consider restating this point. It is not just fall river flows that act as a migration cue for pre-spawning adults of all these species. For instance, delta smelt migration flow cues may occur in the winter.  | Text has been modified to address this comment.   |

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| 131 | 3-67         | 3.4.1.3                       | 39        | Various DWR   | New north Delta diversions will also affect WOCML2.   | Text has been modified to address this comment.   |
| 132 | 3-68         | 3.4.1.3                       | Table 3.5 | Greg Gartrell<br>Contra Costa Water District            | It would be helpful to see how the proposed operations compare to historical operation in terms of CVP/SWP diversions and reservoir releases and flows/releases made for environmental purposes.  | Text not modified. Table identifies proposed operations. A comparison of changes in biological conditions from base conditions, however, will be provided in Chapter 5, <i>Effects and Conservation Analysis</i> .  |
| 133 | 3-69         | 3.4.1.3                       | 3-6       | Justin Fredrickson<br>California Farm Bureau Federation | “These diversions both require and create an artificial north-to-south flow of 3 water through the Delta (as opposed to the natural general east-to-west flow pattern) and 4 have resulted, <u>in combination with the tides</u> , in the development of reverse flows in major Delta channels that result in 5 entrainment of fish, invertebrates, nutrients, and other organic material.” | Text has been modified to address this comment.   |
| 134 | 3-70         | Table 3.5 and following table |           | Various DWR   | Nice way to distinguish between operations currently being investigated and operations which may later be agreed upon.  | Text not modified. Comment does not call for modification.  |
| 135 | 3-70 to 3-74 |                               |           | National Marine Fisheries Service                       | 7. The proposed water operations (pages 3-70 to 3-74) would require approval from State Water Quality Control Board yet there is no such acknowledgement in the document.   | Text not modified. Regulatory processes necessary for BDCP implementation will be described in BDCP Chapter 1 <i>Introduction</i> and in the BDCP EIR/EIS. The State Water Resources Control Board will use the BDCP EIR/EIS for their specific purposes. |
| 136 | 3-70 & 3-71  |                               |           | National Marine Fisheries                               | 12. Pages 3-70 & 3-71. The Proposed Operations for Hood Bypass operational rules would increase risk of Sacramento Basin anadromous fish entering the interior Delta through Georgiana Slough where survival  | Text not modified. Potential effects of this measure on biological  |

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|     |        |           |        | Service                           | <p>rate is lower. This would happen through increased frequency of bidirectional flow for fish that have passed the Georgiana Slough bifurcation, such that reverse flow would allow the fish another opportunity to enter Georgiana Slough.</p> <p>With the proposed Hood Bypass criterion of 11,000 cfs, empirical data show that ~30% of mainstem Sacramento River fish past Steamboat junction entered Georgiana Slough, with the Delta Cross Channel closed and Freeport flows at 11,300cfs (Burau et al. 2007). Survival of fish in Georgiana Slough is less than one-half of that in the main stem Sacramento River, based on the Ryde releases (Newman 2008).</p> <p>Burau, J., A. Blake, and R. Perry. 2007. Sacramento/San Joaquin River Delta regional salmon outmigration study plan: Developing understanding for management and restoration. 72 pages plus appendices. Available at:<br/> <a href="http://www.science.calwater.ca.gov/pdf/workshops/workshop_outmigration_reg_study_plan_011680.pdf">http://www.science.calwater.ca.gov/pdf/workshops/workshop_outmigration_reg_study_plan_011680.pdf</a></p> <p>Newman, K.B. 2008. An evaluation of four Sacramento-San Joaquin River Delta juvenile salmon studies. Prepared for CalFed Science Program. Project No. SCI-06-G06-299. March 31. 182 pages. Available online at:<br/> <a href="http://www.science.calwater.ca.gov/pdf/psp/PSP_2004_final/PSP_CalFed_FWS_salmon_studies_final_033108.pdf">http://www.science.calwater.ca.gov/pdf/psp/PSP_2004_final/PSP_CalFed_FWS_salmon_studies_final_033108.pdf</a></p> | resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> .   |
| 137 | 3-72   |           |        | National Marine Fisheries Service | 11. Page 3-72. Old and Middle River Flows criterion does not comport with conditions described in NMFS' 2009 OCAP Biological Opinion, see RPA for OMR flows and San Joaquin River Inflow Ratio. We suggest BDCP be made consistent with NMFS' biological opinion.   | Text not modified. The table presents future proposed operations for use in the effects analysis.                              |
| 138 | 3-74   |           |        | National Marine Fisheries Service | 8. Page 3-74 does not explain operational criteria for Delta outflow.   | Text not modified. Table entries describe changes from D1641 criteria and criteria previously presented to Steering Committee. |
| 139 | 3-76   | 3.4.1.3   | 14-16  | Greg Gartrell<br>Contra Costa     | The new north Delta facilities do not reduce the spatial overlap of diversion facilities with all covered species ~ in fact, the new facilities   | Text modified to clarify that reduction of "entrainment of   |

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|     |        |           |        | Water District                                  | present a new hazard to Sacramento River salmon. Additionally, since there are no historical fish monitoring surveys near the new north Delta facilities, declarations regarding distribution in this area are unsupported.  | the larvae of covered fish species” does not include juvenile salmonid life stages.  |
| 140 | 3-76   | 3.4.1.3   | 14-21  | Greg Gartrell<br>Contra Costa<br>Water District | Hypothesis 1 does not consider the possibility that moving the pumps to the north will change the flow and salinity patterns in the Delta such that the covered species may relocate to a salinity range similar to the one where they are currently found and that would likely be closer to the new north Delta pumps.   | Text not modified. Text presents a hypothesis that will be evaluated in the effects analysis and though monitoring during implementation.  |
| 141 | 3-76   | 3.4.1.3   | 22-26  | Greg Gartrell<br>Contra Costa<br>Water District | Hypothesis 2 (positive barrier fish screens will substantially reduce entrainment) is well supported in literature and monitoring studies. We support the proposal to screen the proposed intakes in the north Delta and recommend the BDCP incorporate screens for the existing project facilities in the south Delta. Screening even a small portion of the capacity could have significant ecological benefits, especially when the total export rate at the existing facilities is reduced, as required by both the current FWS BO RPAs and the proposed long-term operations.   | Support for screening the new north Delta intakes is appreciated. Comment acknowledges that there are differing viewpoints regarding the technical efficacy of modifying the pumping plants for the purpose of reducing entrainment. |
| 142 | 3-76   | 3.4.1.3   | 36-45  | Greg Gartrell<br>Contra Costa<br>Water District | Discussion of tidal flows and zone of influence is confusing and not accurate. In a purely tidal environment, the “zone of influence”, or the area where a molecule of water that passes a specific location (say a potential diversion site) can be found, is a discrete area within a tidal excursion of the site. In a purely riverine environment, the “zone of influence” is everywhere upstream of the site (a much larger area than the tidal excursion zone). Tidal oscillations do not increase the “zone of influence” of the pumps; the level of pumping increases the region affected. We recommend deleting hypothesis 4. | Text has been modified to clarify the hypothesis.  |
| 143 | 3-76   | 3.4.1.3   | 42-45  | Greg Gartrell<br>Contra Costa<br>Water District | There is no requirement for unidirectional flow past a screened intake. See comment 11.  | Text modified to clarify that a minimum unidirectional flow is necessary to maintain the design efficiency of the screens.   |
| 144 | 3-77   | 3.4.1.3   | 1-8    | Greg Gartrell                                   | Hypothesis 5 is unsubstantiated. If the Sacramento River is a poor   | Text has been modified to  |

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|     |        |           |        | Contra Costa Water District                  | source of nutrients, phytoplankton, zooplankton etc compared to the South Delta, references should be added; otherwise, this hypothesis should be removed. See comment 18 above.  | include supporting citations. The hypothesis will be tested in the effects analysis and through monitoring during implementation.   |
| 145 | 3-77   | 3.4.1.3   | 9      | Greg Gartrell<br>Contra Costa Water District | <del>“Improving hydrodynamics-</del> Modifying hydrodynamics within Delta channels will improve fishery and aquatic habitat within the Delta.”  | Text has been modified to address this comment.   |
| 146 | 3-77   | 3.4.1.3   | 9-14   | Greg Gartrell<br>Contra Costa Water District | <p>Hypothesis 6 that changing hydrodynamics “will improve fishery and aquatic habitat within the Delta” is vague and cannot be tested. We recommend the hypothesis be deleted.</p> <p>Additionally, the assertion that flow patterns have been altered to “maintain high quality water” in the south Delta for project exports is misleading. Although it is true that current operations are managed to keep salinity from exceeding specific limits at key locations in the Delta, prior to European settlement, salinity levels would seldom, if ever, have reached the currently imposed limits “naturally”.</p> <p>Current flow patterns have evolved in some areas to essentially mitigate for other human impacts. Changing those flow patterns without addressing the other issues will likely be detrimental. For instance, opening the DCC is necessary to prevent toxic build-up in the interior delta, which is a direct result of the low San Joaquin River inflow (due to upstream diversions) and poor San Joaquin River water quality (due to discharges, including discharge of exported water). For instance, USGS analyses of stable isotope and Se data from <i>Corbula</i> showed a statistical link between a San Joaquin River isotopic signal and seasonal increases in Se concentrations in bivalves. Increasing residence time in the Delta and closing the DCC more often could increase the bioaccumulation of Se and other contaminants.</p> | Text has not been modified. Text states a hypothesis that will be tested in the effects analysis and through monitoring during implementation. The text simply states that flow patterns have been altered to maintain water quality objectives and does not relate those objectives to pre-European settlement conditions. |
| 147 | 3-77   | 3.4.1.3   | 15-20  | Greg Gartrell<br>Contra Costa Water District | Should also implement a pilot fish screen (~2,000 cfs) for the existing export facilities to effectively reduce entrainment and eliminate the need for fish handling when exports are at low levels.  | Text not modified. Comment is not related to the hypothesis.  |
| 148 | 3-77   | 3.4.1.3   | 21-26  | Greg Gartrell                                | Improved water supply reliability is not relevant for conservation  | Text has not been modified.   |

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|     |        |           |        | Contra Costa Water District                             | measures.  | Improved supply reliability is a goal of the BDCP.   |
| 149 | 3-77   | 3.4.1.3   | 27-33  | Greg Gartrell<br>Contra Costa Water District            | <p>Hypothesis 9 expounds on the idea that the south delta is food limited due to exports and ignores other factors that control the food web. Increasing residence time does not mean that there will be more phytoplankton. Increased residence time could result in a proliferation of clams and a reduction of phytoplankton. In fact, in recent years, the USGS have observed high phytoplankton levels in the San Joaquin River between Vernalis and Turner Cut, a river stretch with relatively few clams. However, the phytoplankton bloom does not persist in the central and south Delta, where clam biomass is much higher (J. Thompson, 2007).</p> <p>Additionally, increased residence time may lead to increased salinity, increased bioaccumulation of toxins, and rising temperatures.</p>  | Text not modified. Text presents a hypothesis that will be tested in the effects analysis and though monitoring during implementation. |
| 150 | 3-77   | 3.4.1.3   | 34-44  | Justin Fredrickson<br>California Farm Bureau Federation | <p>(Re: “Reducing the reliance on through-Delta conveyance via the Delta Cross Channel and intakes in the south Delta will provide greater opportunity for effective physical habitat restoration and enhancement in the western, eastern, and southern Delta. Decreased south Delta pumping will reduce the export of primary and secondary ecological production that may result from restored habitat, which would other reduce or eliminate the expected benefits of the habitat restoration also proposed by the BDCP. Restoration in these parts of the Delta, as well as Delta-wide hydrodynamic changes expected from a north Delta diversion, will reestablish ecosystem complexity by improving aquatic ecosystem processes, distribution, connectivity, migration, transport, and residence time in ways that the current water conveyance system 43 simply cannot accommodate.”)</p> <p><i>Comment: The stated rationale here is clear enough. What is lacking overall in terms of proposed DCC operations is an explanation why DCC operations with water quality benefits in June and September would be biologically harmful during those same, generally less sensitive times of year.</i></p> | Text has been modified to clarify the hypothesis relative to south Delta diversions and related operations.                            |
| 151 | 3-77   | 3.4.1.3   | 38     | Various   | Replace “other” with “otherwise” as it is the apparent intent of the   | Text has been modified to  |

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|     |        |           |        | DWR  | sentence. So it should read "..., which would 'otherwise' reduce or eliminate..."  | address this comment.   |
| 152 | 3-77   | 3.4.1.3   | 40-44  | Greg Gartrell<br>Contra Costa<br>Water District                  | <p>"Restoration in these parts of the Delta, as well as Delta-wide hydrodynamic changes expected from a north Delta diversion, will reestablish ecosystem complexity by improving aquatic ecosystem processes, distribution, connectivity, migration, transport, and residence time in ways that the current water conveyance system simply cannot accommodate."</p> <p>This is a sweeping hypothesis that would be difficult to evaluate. Please be more specific.</p>  | Text has been modified to clarify the hypothesis.   |
| 153 | 3-78   | 3.4.1.3   | 1-4    | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | <p>(Re: "Reducing the reliance on through-Delta conveyance via the Delta Cross Channel and intakes in the south Delta will substantially reduce the effects of existing water projects on salmonids in the San Joaquin River system and tributaries, Mokelumne River, and other east side tributaries.")</p> <p><i>Comment: See preceding concern re: DCC ops in June and September.</i></p>   | Text has been modified to clarify the hypothesis relative to south Delta diversions and related operations.                                     |
| 154 | 3-78   | 3.4.1.3   | 1-6    | Greg Gartrell<br>Contra Costa<br>Water District                  | <p>"Reducing the reliance on through-Delta conveyance via the Delta Cross Channel and intakes in the south Delta will substantially reduce the effects of existing water projects on salmonids in the San Joaquin River system and tributaries, <del>Mokelumne River, and other east side tributaries.</del>"</p> <p>The relevancy of this hypothesis for Mokelumne River and east side tributaries is unsubstantiated. Increased closure of the DCC gates is likely to impact juvenile salmonids emigrating from the Mokelumne and Consumnes River systems. See comment 21.</p> | Text not modified. Text presents a hypothesis that will be evaluated in the effects analysis and through monitoring during plan implementation. |
| 155 | 3-78   | 3.4.1.3   | 6-9    | Greg Gartrell<br>Contra Costa<br>Water District                  | <p>Although it is true that fish screens will reduce the potential for direct mortality at the north Delta diversions, diverting water from the Sacramento River in the north Delta will still cause indirect mortality due to increased predation on the lower Sacramento River and distributaries, resulting from reduced Sacramento River flow.</p> <p>With this new hazard for Sacramento River salmonids, it is difficult to</p>  | Text not modified. Text presents a hypothesis that will be evaluated in the effects analysis and through monitoring during plan implementation. |

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|     |        |           |        |  | see how the new facilities can be a conservation measure.  |  |
| 156 | 3-78   | 3.4.1.3   | 10-12  | Greg Gartrell<br>Contra Costa<br>Water District    | <p>“Relocation and operation of the primary point of diversion to the north Delta will facilitate the implementation of some other conservation measures focused on non-flow and non-habitat related stressors.”</p> <p>Please elaborate on what other CMs will be facilitated; otherwise, this hypothesis is untestable.</p>  | Text has been modified to address this comment.  |
| 157 | 3-78   | 3.4.1.3   | 13-20  | Greg Gartrell<br>Contra Costa<br>Water District    | <p>None of the flow and salinity results from BDCP modeling to date resemble “more natural physical patterns”. In fact, it is unlikely that the BDCP could create more natural flow and salinity variability without the cooperation of upstream diverters, currently not considered in the BDCP. Either the upstream diverters (including non-project reservoirs) need to be brought into the discussion, or this assumption should be deleted.</p> <p>If more natural conditions are to be discussed, those “natural conditions” should be described: for example, the number of days with flows/salinity above or below a certain level in fall currently versus the target level. Numerous sources are available for this and CCWD can help in providing them.</p> | Text not modified. Text presents a hypothesis that will be tested through the effects analysis modeling. |
| 158 | 3-78   | 3.4.1.3   | 21+    | Greg Gartrell<br>Contra Costa<br>Water District    | <p>“Maintaining bypass flows” ... This section does a good job of justifying why bypass flows are necessary. However, the repeated use of the word “maintaining” is erroneous and misleading. Flows will not be maintained, but will actually be reduced. Bypass flows are required to lessen the impact of the flow reduction.</p> <p>For example, predation pressure on Sutter and Steamboat sloughs is expected to increase due to the reduction in flow on the Sacramento River (due to the new north Delta diversion facilities). Setting a minimum level of flow that must stay in the Sacramento River (bypass flow) is expected to reduce the impact of the north Delta diversions.</p>  | Text not modified. The term “maintaining” modifies “bypass flows” and not flows in general.              |
| 159 | 3-78   | 3.4.1.3   | 36-40  | Justin<br>Fredrickson<br>California Farm<br>Bureau | (Re: “Both slough channels support substantially 37 more woody riparian vegetation and greater habitat diversity (e.g., water depths, 38 velocities, in-channel habitat, etc.) than is present along the mainstem Sacramento 39 River between Courtland and Rio Vista.”)   | Text has been modified to address this comment.  |

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|     |        |           |        | Federation                                      | <i>Comment: The text does not mention potential “predation pressure” in sloughs, which runs somewhat against the grain of this hypothesis. Consider possibly cross-referencing non-natives, other stressor CMs.</i>   |  |
| 160 | 3-79   | 3.4.1.3   | 4-10   | Greg Gartrell<br>Contra Costa<br>Water District | This preliminary modeling should be released to Steering Committee members while in draft. For the final report, these modeling results should be documented (appendix?) and referenced here.   | Text not modified. Final document will reference relevant modeling results of proposed operations. Results will be provided in an appendix.  |
| 161 | 3-79   | 3.4.1.3   | 25-29  | Greg Gartrell<br>Contra Costa<br>Water District | Hypothesis 3 recognizes that the Sacramento River is an essential source of food and organic material. This vital piece of information is neglected in much of the text that suggests that somehow the new pumps are going to take out just the water and leave in all of lower level planktonic material. The new pumps will remove a substantial portion of planktonic and organic matter from the Sacramento River and Northern Delta.   | Text not modified. Other text references cited in the comment refer to comparisons of productivity between south Delta and north Delta. Potential effects of this measure on biological resources will be addressed in Chapter 5, <i>Effects and Conservation Analysis</i> . |
| 162 | 3-80   | 3.4.1.3   | 13-24  | Greg Gartrell<br>Contra Costa<br>Water District | <p><b>“WOCML12: Operate South Delta diversions to maintain sufficient Old and Middle River Flows <u>reduce entrainment at the South Delta export facilities and to reduce the risk of predation within Clifton Court Forebay during the long-term implementation period for environmental benefits.</u> Based upon fish distribution information from field surveys and fish salvage reports at the South Delta export facilities, together with net flow in Old and Middle River, operational limits will be placed upon the South Delta diversions for environmental benefits. Maximum Old and Middle River (OMR) reverse flows during the long-term implementation period set under the BDCP will reduce the impacts of south Delta diversions on covered fish species and the Delta environment.</b></p> <p>With dual operation with the new North Delta facilities, <u>d</u>Diversions</p> | Text has been modified to clarify the purpose of the conservation measure.   |

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|     |        |           |        |             | <p>from the south Delta SWP and CVP facilities will be reduced considerably during wetter periods <del>with dual operation of new north Delta diversion facilities, when sufficient water is available on the Sacramento River.</del> <u>During wetter periods in the BDCP long term implementation period, water will be diverted from the south Delta to augment north Delta diversions and may be diverted in appropriate circumstances to improve circulation and maintain water quality conditions in the interior and southern Delta.</u> However, during drier periods, when there is insufficient flow in the Sacramento River for environmentally safe diversions at the north Delta facilities (i.e. insufficient bypass flows), the south Delta diversions are likely to account for over 60% of the total exports. <u>To reduce risk of entrainment and predation, the South Delta exports will be reduced.</u></p> <p>This parameter will affect WOCML9 and 14 and will be affected by operations associated with WOCML1, 5, and 8. For more information about Old and Middle River flows, see WOCMN12.”</p> <p>Note: The discussion on the use of South Delta diversions to “maintain water quality” is in the wrong section. This CM deals with reducing South Delta exports to limit entrainment. WOCML# deals with preferential pumping in the South Delta due to contaminant accumulation. This text confounds the two issues.</p> |   |
| 163 | 3-80   | 3.4.1.3   | 37     | Various DWR | <p>You cannot alter Fremont Weir to increase flows into the Yolo Bypass without addressing fish passage. The periods of prescribed inundation will also act as additional attraction flows, drawing more fish to this productive area. Salmonids, lampreys, and sturgeon will need efficient connectivity with the Sacramento River. This needs to be incorporated into the title.</p> <p>Edit; ...provide for a higher frequency and duration of inundation of the Yolo Bypass <b>while improving fish passage.</b></p>   | Title of measure not modified. Fish passage is included as an element in the Fremont Weir/Yolo Bypass conservation measure. |
| 164 | 3-81   | WOCM L2   | 2      | Various DWR | <p>Bravo! Add “fish passage needs” to the line “other elevations may be considered if necessary to satisfy inundation targets [or fish passage needs].”</p>  | Text has been modified to address this comment.   |
| 165 | 3-81   | 3.4.1.3   | 13-15  | Various     | <p>Increased flow through the Yolo bypass is likely to attract additional</p>  | Text has been modified to   |

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|     |        |           |        | DWR   | migrating fish and any fish passage facilities should be constructed/operated to allow passage of lamprey as well as salmonids and sturgeon.  | address this comment.   |
| 166 | 3-81   | 3.4.1.3   | 33-36  | Justin Fredrickson<br>California Farm Bureau Federation | “To implement this conservation measure, the BDCP Implementing Entity will coordinate with 33 the U.S. Army Corps of Engineers and other flood control entities, <u>and also with CDFG and private landowners in the bypass</u> , as appropriate, to ensure that fish passage improvements, bypass improvements, and Fremont Weir operations are compatible with the flood control functions of the Yolo Bypass.”                 | Text has not been modified. Text is directed at engaging entities charged with flood control responsibility. BDCP will coordinate with landowners in all aspects of its habitat restoration/enhancement programs. |
| 167 | 3-81   | WOCM L2   | 42     | Various DWR   | WOCML2 could also affect new north Delta diversions.  | Text has been modified to address this comment.   |
| 168 | 3-82   | WOCM L2   | 3-8    | Various DWR   | Document would be stronger if Tech Memo 2, rather than “A Munevar, pers. Comm were referenced. There may be a reason I am not aware of for this; if it’s a strategic decision, I can accept it.   | Text has been modified to address this comment.   |
| 169 | 3-82   | 3.4.1.3   | 9      | Various DWR   | Stated; gate(s) could be operated to stop flows into the Bypass... This needs to be changed to ... <b>could be operated to reduce flows from the Sacramento River if the river is below flood stage and allow for fish passage, while allowing for the drainage of the Bypass.</b> WOCML2 cannot function without all phases addressing fish passage and wording throughout the description of this Action needs to reflect this. | Text has been modified to address this comment.   |
| 170 | 3-82   | 3.4.1.3   | 12-13  | Justin Fredrickson<br>California Farm Bureau Federation | “The majority of historical floodplain in the Sacramento/San 12 Joaquin River system, <u>and particularly in the Delta</u> , has been lost.”  | Text has been modified to address this comment.   |
| 171 | 3-82   | 3.4.1.3   | 19     | Various DWR   | Edit Problem Statement - needs to be expanded to include; ...habitat for covered fish species, inputs to the food web, <b>and fish passage.</b> Fish passage is mentioned in the following Hypotheses and must be included in the problem statement.  | Text has been modified to address this comment.   |
| 172 | 3-82   | 3.4.1.3   | 33-39  | Greg Gartrell<br>Contra Costa                           | How does an alternative migration route increase passage? Do you have any information on relative survival on each of the routes?   | Text has been modified to clarify the hypothesis.   |

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|     |        |           |        | Water District  |  |   |
| 173 | 3-82   | 3.4.1.3   | 34     | Various DWR   | Edit; ...lamprey, <b>and possibly steelhead (Delete – white sturgeon)</b> . This bullet implies that it focuses on juveniles. No juvenile sturgeon will be able to use the Bypass due to the timing of their down migration and the portion of the water column they use. No juvenile sturgeon have been documented in the Yolo Bypass.  | Text has been modified to address this comment.   |
| 174 | 3-82   | 3.4.1.3   | 40-42  | Various DWR   | Although passage at Fremont weir will be improved over current conditions, modifying Fremont weir will attract more migratory fish into the Yolo bypass, which is less conducive to fish passage than the mainstem Sacramento R.   | Text not modified. Text presents a hypothesis that will be evaluated in the effects analysis and though monitoring during implementation. |
| 175 | 3-82   | 3.4.1.3   | 41-42  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “It is thought that an inundated Yolo Bypass 41 is used as an alternative route for upstream migrating salmonids and sturgeon.”)<br><br><i>Comment: Is there a temporal disconnect here or at least some possible overstatement of benefit? Which runs of salmon or to what extent would sturgeon be actually likely to use an inundated Bypass at this time of year for <u>upstream</u> migration?</i>   | Text has been modified to clarify the hypotheses.   |
| 176 | 3-83   | 3.4.1.3   | 15     | Greg Gartrell<br>Contra Costa Water District            | This text indicates that delta smelt are not food limited. Several of the hypotheses for other conservation measures rely on increasing primary and secondary productivity; clearly, those actions are not intended to aid delta smelt. It would be helpful when discussing increasing food and production to discuss which of the covered species are food limited.   | Appropriate text in Chapter 3 has been modified to address this comment.  |
| 177 | 3-83   | WOCM L2   | 39-40  | Various DWR   | Suggest reword of “...historical floodplain surfaces presently in other land uses” to “...within an existing designated floodway area.” My concern is that implication that Yolo Bypass is not presently in other land uses will unnecessarily spark anger from those presently using Yolo Bypass for agriculture, recreation, etc. Even stronger wording that “the proposed changes are anticipated to allow continuation of present land uses” may be warranted. | Text not modified. The text is clear as to the intent of the action.  |
| 178 | 3-83   | WOCM L2   | 41-42  | Various DWR   | Replace “versus” with “and”  | Text has been modified to clarify the hypotheses.   |
| 179 | 3-84   | 3.4.1.3   | 14-15  | Greg Gartrell<br>Contra Costa                           | “maintain sufficient water quality in the <u>central and</u> south Delta in combination with minimal year-round pumping in the south Delta (see  | Text has been modified to clarify that DCC gate   |

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|     |        |           |        | Water District  | WOCML12). Seasonally elevated water temperatures and an accumulation of toxics can occur in the central and south Delta, likely as a result of high residence times associated with low inflows from the San Joaquin River. These impairments can have lethal and sublethal effects on covered fish species inhabiting the south and central Delta. <u>Shifting CVP and SWP diversions to the north Delta has the potential to exacerbate this problem; opening the DCC gates at times is expected to reduce this impact.</u> | operations affect water quality in the central as well as south Delta. Text has not been modified to include remaining suggested text because it alters the premise of the hypothesis.              |
| 180 | 3-84   | 3.4.1.3   | 14-15  | Justin Fredrickson<br>California Farm Bureau Federation | “maintain sufficient water quality in the central and south Delta in combination with minimal year-round pumping in the south Delta”  | Text has been modified to clarify that DCC gate operations affect water quality in the central as well as south Delta.  |
| 181 | 3-85   | 3.4.1.3   | 31-35  | Justin Fredrickson<br>California Farm Bureau Federation | “The balance of fish protection, water supply reliability, and water 31 quality for both fish and humans is dependant, in part, on <del>hydrologic</del> hydrodynamics and water quality 32 (e.g., salinity, dissolved oxygen, etc.) conditions (e.g., salinity, dissolved oxygen, etc.) occurring within the Delta channels, the 33 densities of covered fish in the general region of the central and south Delta, and the 34 magnitude of effect of south Delta exports on reverse flows in Old and Middle Rivers.”        | Text has been modified to address the comment.  |
| 182 | 3-85   | 3.4.1.3   | 32     | Greg Gartrell<br>Contra Costa Water District            | “(e.g., salinity, dissolved oxygen, <u>temperature</u> , etc.)”   | Text not modified. Text does not preclude water temperature as a water quality constituent, but the linkage between water operations and effects on water temperature is not apparent at this time. |
| 183 | 3-86   | 3.4.1.3   | 1-7    | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: As a general topical comment on conservation strategy’s treatment of Delta water quality in various places throughout text, would be helpful to distinguish (i.e., explain somewhere the qualitative differences) between “good” and “bad” productivity. Specifically, residence times and enhanced productivity (DOC, etc.) is characterized in text as a good thing; elsewhere, though, as here, the text also acknowledges the increase residence times can also associated with</i>                           | Appropriate Chapter 3 text has been modified to address this comment.   |

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|     |        |           |        |   | <i>negative water quality consequences (low DO, toxics, proliferation of Microcystis, etc.).</i>  |  |
| 184 | 3-86   | 3.4.1.3   | 16-23  | Justin Fredrickson<br>California Farm Bureau Federation | <p>(Re: "<u>WOCML14: Maintain in-Delta agricultural, municipal, and industrial water quality requirements during the long-term implementation period.</u> In the long-term implementation period the BDCP Implementing Entity will continue to maintain existing D-1641 North and Western Delta agricultural and municipal and industrial (M&amp;I) standards, except that the D-1641 compliance point will be moved from Emmaton to the Three Mile Slough juncture. All water quality requirements contained in the North Delta Water Agency/DWR Contract and other DWR contractual obligations will be maintained. Operations under WOCML1, 2, 5, 11, and 12 could affect this parameter. For more information about Delta salinity, see WOCMN14.")</p> <p><i>Comment: We are having the same problem with this language that we originally had with parameter #8 in the DRAFT Proposed Long-Term BDCP Water Operations Range of Criteria for Effects Analysis: Namely, that the conservation measure as described commits to maintenance of existing D-1641 North and Western Delta agricultural and municipal and industrial (M&amp;I) standards and contractual obligations, including DWR's contractual obligations to the North Delta Water Agency, but is silent on Central and South Delta standards and noncontractual water quality objectives established under the Porter-Cologne Act in D-1641.</i></p> <p><i>We were able to negotiate a footnote to #8 in the preliminary Range of Criteria table as an acceptable, temporary resolution of this issue at that particular juncture. (The text of the that footnote is on page 3-74 of the Draft Coservation Strategy and reads, "The results of the water quality modeling from the effects analysis will be used, to determine if other actions are needed to address water quality issues that may arise, including water quality in the southern and central Delta for both Agricultural and M&amp;I due to the BDCP Long-term operations.") Here again, however, and it seems now likely, in the proposed near- and</i></p> | The issues identified in the comment will be addressed through the on-going BDCP Steering Committee process. Appropriate modifications to text will be made as agreements are reached. |

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|  |        |           |        |           | <p><i>long-term range operations soon coming to the Steering Committee as well, this will remain an issue, as long as there is a lack of a common understanding and the issue is not consistently addressed hereafter.</i></p> <p><i>To adequately address this issue going forward and avoid its coming back again and again, the parties in the BDCP process need to reach an understanding as to various points:</i></p> <p><i>First, it should be a fairly noncontroversial assertion that water quality requirements in the Porter-Cologne Act for the reasonable protection of existing beneficial uses, including irrigation as an existing beneficial use in the Delta, apply now.</i></p> <p><i>Second, existing agricultural standards for the Central and South, as well as the West Delta, are currently governed by the State Water Resources Control Board's Decision 1641 and certain related court decisions.</i></p> <p><i>Third, compliance with duly established future or existing water quality standards is both an express condition of the project's existing water rights permits and an important factor to be considered by the State Water Resources Control Board in connection with any future change petition relating to an isolated facility. The issue relates to an actual important legal and regulatory constraint on various actions proposed by the BDCP and should be address.</i></p> <p><i>Fourth, the South Delta salinity standards currently found in D-1641 are presently under review and could conceivably change in the future—again, however, even new or adjusted standards will have, necessarily, to strike a balance in ensuring reasonable protection of designated beneficial uses in Delta, including irrigated agriculture; as such, it would seem that the BDCP should acknowledge that some form of agricultural salinity controls will continue to affect and constrain project operations to some extent, for the indefinite future. As such, it is again absolutely necessary that BDCP near- and long-term proposed</i></p> |             |

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|  |        |           |        |           | <p><i>operations forthrightly and responsibly make allowance for South and Central Delta salinity control and that the process not propose any form of operations that do not take due appropriate account of this important regulatory constraint.</i></p> <p><i>Fifth, as reflected in the footnote incorporated in the draft Range of Criteria table, any water quality problems in the South and Central Delta to emerge from DSM2 and any other detailed hydrodynamic modeling of the BDCP's proposed near- and long-term operations its effect analysis, should be identified and addressed, as appropriate and necessary, in subsequent refinements to the BDCP's proposed operations—and also, presumably, through eventual water quality alternatives, impacts, and mitigation analyses in the BDCP's EIR/EIS and any related water rights or water quality proceedings before the State Water Resources Control Board.</i></p> <p><i>Sixth, to avoid recurrence of issues pertaining to Central and South Delta salinity, it would seem that there is a need for some more formal and explicit understanding that reasonable protection of irrigated agricultural as a designated beneficial use in the Central and South Delta, through compliance with duly established water quality objectives, either now or in the future, is an obligation that inevitably runs in parallel to any obligations or commitments by the project operators under contract with other parties or in other parts of the Delta. Accordingly, the process must find acceptable ways to reasonably address water quality issues related to the Central and South Delta and interface toward this same end with other related processes on an on-going basis.</i></p> <p><i>Farm Bureau looks forward to additional opportunities to work through the various aspects of this important issue—and, one would hope, to eventually arrive at an approach within the BDCP process that can provide some reasonably satisfactory and enduring resolution of the issue.</i></p> |             |

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|     |        |           |           |  | ( <b>Note:</b> See related comments on similar, near-term water operations-related language at pages 3-62 and 3-63, lines 3-62:36 through 3-63:11.)   |   |
| 185 | 3-88   | Table 3.6 |           | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR | I don't think salt marsh harvest mice actually occur in freshwater tidal marsh, only brackish. They may also occur in natural and seasonal managed wetlands and grasslands depending on their vegetative composition and whether they occur in the species' range.  | Text has been corrected to indicate that footnote 1 applies to this species. Footnote explains reason for including this community as supporting species habitat. |
| 186 | 3-88   | Table 3.6 |           | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR | It's doubtful that seasonal and managed wetlands actually function as giant garter snake habitat since they typically have water only during the snake's dormant period, but maybe there are some with persistent water during their active season. This difference needs to be recognized and addressed for the purposes of mitigating impacts in specific locations categorized as these types of wetlands. | Text not modified. This comment will be addressed in text that will be added in subsequent drafts to address covered wildlife species.                            |
| 187 | 3-88   | Table 3.6 |           | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR | Western pond turtles occur in brackish tidal marshes as well as freshwater (as is pointed out in the document on page 3-103). Also, if the natural and seasonal wetlands are suitable for giant garter snakes, they are most likely also suitable for western pond turtles; however, as mentioned above, often these habitat types have the opposite water regimes than those required by these species.      | Text has been modified to address this comment.   |
| 188 | 89     | 3.4.2     | Table 3.6 | Various<br>DWR                               | Habitat for Alkali milk-vetch is also found in grasslands surrounding seasonal wetlands   | Text has been modified to address this comment.   |
| 189 | 89     |           |           | Various<br>DWR                               | Habitat for Carquinez goldenbush is also found in grasslands  | Text has been modified to address this comment.   |
| 190 | 89     |           |           | Various<br>DWR                               | In surveys Heckard's peppergrass was also found in grasslands surrounding seasonal wetlands   | Text has been modified to address this comment.   |
| 191 | 89     |           |           | Various<br>DWR                               | What does Note #1 refer to?   | Text has been corrected to indicate species to which this footnote applies.   |
| 192 | 3-90   | 3.4.2     | 3         | Various<br>DWR                               | Reformat Figure 3.1 (referred to here) to be clear so that the reader may better see what is being discussed in this section.   | Figure has been revised to address clarity.   |
| 193 | 3-90   | Table 3.7 |           | Various<br>DWR                               | Clarify that restored acres are in addition to enhanced acres. (Reiterate footnote from p. 3-87)  | Text has been modified to address this comment.   |
| 194 | 3-92   | 3.4.2     | 10        | Various                                      | Reformat Figure 3.1 (referred to here) to be clear so that the reader may   | Figure has been revised to  |

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|-----|--------|-----------|--------|---|---|---|
|     |        |           |        | DWR   | better see what is being discussed in this section.   | address clarity.  |
| 195 | 3-92   | 3.4.2     | 26-27  | Justin Fredrickson<br>California Farm Bureau Federation | “Consequently, 25 areas within the central Delta that are deeply subsided—and which would be, therefore, unsuitable for restoration tidal marsh or any of the other habitat types being targeted by the BDCP—have generally been excluded from ROAs. 26 | Text not modified. As stated on pg 3-92, lns. 10-13, habitat may be restored or enhanced in other Delta locations, which could include subsided lands in the central Delta. |
| 196 |        |           |        | National Marine Fisheries Service                       | 14. Restoration conservation measures should be carefully designed to ensure habitat is preferable to native species.   | Text not modified. Section 3.4.2.1 states that the purpose of restoration and enhancement actions is to provide habitat for covered species.                                |
| 197 |        |           |        | National Marine Fisheries Service                       | 15. For restoration actions, conservation credit should be given only for acreages of usable habitat, not for the entire acreage acquired that may have habitat that is unusable for covered species.   | Text not modified. “Crediting” of conservation actions is not a Chapter 3 topic.  |
| 198 |        |           |        | National Marine Fisheries Service                       | 16. There is a lack of channel margin habitat restoration being proposed for the mainstem Sacramento River, which is a main rearing and migratory corridor for salmonids.   | Text not modified. Text represents current proposed conservation measure. Text will be revised to reflect any revisions to the measure approved by the Steering Committee.  |
| 199 | 3-94   | 3.4.2.2   | 22-24  | Justin Fredrickson<br>California Farm Bureau Federation | “For the purpose of this conservation measure, the acreage target for 22 restored tidal marsh includes areas of subtidal habitat and transition upland habitat that form part of a unit in 23 association with the tidal marsh restoration action.”     | Text has been modified to clarify the intent of the statement.  |
| 200 | 95     | 3.4.2.2   | 4      | Various DWR   | Take out the word fish because benefits to other covered species are included in the list below   | Text has been modified to address this comment.   |
| 201 | 3-95   | 3.4.2.2   | 4      | Laura Patterson<br>DWR<br>Kate Brooks                   | Some of the benefits of freshwater tidal marsh habitat discussed are for wildlife species, so they should be mentioned here (i.e., it shouldn’t just be fish species – it should be fish, wildlife, and plant species).                                 | Text has been modified to address this comment.   |

|     | Page # | Section # | Line # | Commenter   | Comment   | Disposition  |
|-----|--------|-----------|--------|---|---|--|
|     |        |           |        | DWR   |   |  |
| 202 | 3-95   | 3.4.2.2   | 6-19   | Justin Fredrickson<br>California Farm Bureau Federation | <p>“increased primary and secondary production within restored tidal marsh channels in 6 support of food production for covered fish species; 7</p> <p>increased export of organic carbon and primary and secondary production from restored marsh into 8 Delta waterways in support of food production for covered fish species within and 9 downstream of the Delta; 10</p>   | Text not modified. Marshes are not existing, so there is no <u>increase</u> in export from them.   |
| 203 | 3-95   | 3.4.2.2   | 6-19   | Justin Fredrickson<br>California Farm Bureau Federation | <p>improved covered fish species habitat conditions within tidal marsh channels and 11 adjacent open water <del>by reducing in the form of potential</del> reduced summer and fall water temperatures <del>through</del> associated with nocturnal 12 tidal thermal exchanges on marsh plain surfaces and reintroduction of cooled water to 13 delta waterways; 14</p>  | Text not modified. Text is stating intended benefits, not potential benefits.  |
| 204 | 3-95   | 3.4.2.2   | 6-19   | Justin Fredrickson<br>California Farm Bureau Federation | <p>reduction of contaminants <del>loading through</del> has a result of filtering of contaminants from Delta waterways or 15 chemical transformation of contaminants to less toxic or non-toxic substances; 16</p> <p>increased in Sacramento splittail spawning and rearing habitat and salmonid and sturgeon 17 rearing habitat associated with restoration of new tidal channels and shallow subtidal 18 habitats adjacent to vegetated marsh plains;”</p> <p><i>Note: See comparable changes below for text on 3-103.</i></p> | Text has been modified to address this comment.  |
| 205 | 3-95   | 3.4.2.2   | 24     | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | <p>Giant garter snake use of tidal marsh is somewhat dubious. Until it’s been established that they occur in this habitat, I don’t know if it’s wise to claim that creation or restoration of this habitat type will benefit this species.</p>  | Text not modified. The current giant garter snake habitat model reviewed by DFG and USFWS indicates that tidal wetlands support its habitat. If tidal wetlands removed as a result of BDCP actions could adversely affect the species, then restoration of tidal |

|     | Page # | Section # | Line # | Commenter   | Comment  | Disposition  |
|-----|--------|-----------|--------|---|--|--|
|     |        |           |        |   |  | wetlands within the species range would be considered to benefit the species.  |
| 206 | 3-95   | 3.4.2.2   | 39-40  | Justin Fredrickson<br>California Farm Bureau Federation | “Surface grading will 39 provide for a shallow elevation gradient from the marsh plain to the upland transition habitat, <u>to provide habitat diversity and maximize the export of primary and secondary productivity and to promote other desirable processes through tidal exchange at the land-water interface.</u> ”  | Text not modified.<br>Suggested revision is redundant with previously stated purposes of restoring tidal marsh.  |
| 207 | 3-97   | 3.4.2.2   | 5-7    | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Some species require upland habitats for overwintering or nesting (e.g., giant garter snakes and western pond turtles), so if these habitats are supposed to support them in perpetuity, the uplands should be high enough to not only be available for future marsh if sea levels rise but also for necessary uplands for amphibious/semi-aquatic covered species (if the conservation strategy is going to claim that these habitat types are supposed to benefit them). | Text not modified.<br>Although BDCP anticipates that the pattern of lands preserved under BDCP will accommodate the issue raised in the comment, it is not a regulatory responsibility of BDCP to address the effects of climate change on biological resources of the Delta, but proposed habitat restoration conservation measures are nonetheless designed to address and accommodate sea level rise. |
| 208 | 3-97   | 3.4.2.2   | 9-11   | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “Shallow freshwater subtidal aquatic habitat in some portions 9 of the Delta support large numbers of non-native predatory fish and extensive beds of non-native 10 submerged aquatic and floating vegetation that adversely affect covered fish species.”)<br><br><i>Comment: It would be helpful if the text could somewhere define, in elevation terms (i.e., X feet below sea-level, etc.), what is meant by the term “shallow subtidal aquatic habitat.”</i>     | Text has been modified to address this comment.  |
| 209 | 97     |           | 31     | Various<br>DWR  | Word or phrase missing at end of sentence  | Text has been modified to address this comment.  |
| 210 | 3-97-  | 3.4.2.2   | 3-97:  | Justin  | “ <b>HRCM4: Restore at least 5,000 acres freshwater tidal marsh</b> ”  | Text has been modified to  |

|     | Page # | Section # | Line #             | Commenter  | Comment   | Disposition                                     |
|-----|--------|-----------|--------------------|--|---|---|
|     | 3-98   |           | 37 through 3-98: 8 | Fredrickson California Farm Bureau Federation        | <b>within the Cache 37 Slough Complex ROA.</b> The BDCP Implementing Entity will restore a minimum of 38 5,000 acres of freshwater tidal marsh in the Cache Slough Complex ROA. Areas suitable 39 for restoration include, but are not limited to, Haas Slough, Hastings Cut, Lindsey 40 Slough, Barker Slough, Calhoun Cut, Liberty Island, Little Holland, the Westlands 41 property (“Yolo Ranch”), Shag Slough, Little Egbert Tract, and Prospect Island. The Cache Slough 42 Complex has been recognized as possibly the best functioning <u>existing</u> tidal habitat area of the 43 Delta. The complex includes Liberty Island, which is likely the best <u>existing</u> model for freshwater tidal marsh restoration in the Delta for native fishes. The Complex supports multiple 1 covered fish species and is presumably one of the last known areas where Delta smelt and 2 longfin smelt spawn and rear successfully. Restoring the amount of freshwater tidal 3 wetlands and subtidal habitat <u>within the Cache Slough Complex ROA</u> and protecting <u>associated</u> upland habitat could benefit multiple 4 covered species and the Delta ecosystem. Additionally, the Cache Slough Complex 5 encompasses a substantial area of land with elevations suitable for freshwater tidal marsh 6 restoration that would involve few impacts on <u>existing</u> infrastructure or permanent crops relative 7 to other areas of the north Delta. | address this comment.                           |
| 211 | 3-98   | 3.4.2.2   | 27-44              | Justin Fredrickson California Farm Bureau Federation | <b>“HRCM6: Restore at least 2,100 acres of tidal marsh within the West Delta ROA.</b> 27 The BDCP Implementing Entity will restore a minimum of 2,100 acres of freshwater 28 tidal marsh in the West Delta ROA. The west Delta includes multiple small areas where 29 tidal marsh, can be restored. Areas suitable for restoration include Dutch Slough, Decker 30 Island, portions of Sherman Island, Jersey Island, Bradford Island, Twitchell Island, 31 Brannon Island, Grand Island, and along portions of the north bank of the Sacramento 32 River where elevations and substrates are suitable. The purpose of restoring tidal marsh 33 in the west Delta is to provide a continuous reach of tidal marsh and aquatic habitat 34 associated with food productivity between current and future restored habitats in the 35 Cache Slough Complex and Suisun Marsh and Bay and to provide tidal marsh habitat 36 within the anticipated future eastward position of the <u>biologically important</u> low salinity zone <u>of the estuary</u> with sea level rise. 37  | Text has been modified to address this comment. |

|     | Page # | Section # | Line #                                   | Commenter   | Comment   | Disposition  |
|-----|--------|-----------|--|---|---|--|
| 212 | 3-98   | 3.4.2.2   | 27-44                                    | Justin Fredrickson<br>California Farm Bureau Federation | <b>HRCM7: Restore at least 5,000 acres of tidal marsh within the South Delta ROA.</b> 38 The BDCP Implementing Entity will restore a minimum of 5,000 acres of freshwater 39 tidal marsh in the South Delta ROA, as a <u>post-near-term goal</u> . Potential sites for restoring freshwater tidal marsh 40 include Fabian Tract, Union Island, Middle Roberts Island, and Lower Roberts Island. 41  | Text has been modified to address this comment.  |
| 213 | 3-98   | 3.4.2.2   | 27-44                                    | Justin Fredrickson<br>California Farm Bureau Federation | <u>In addition to practical and logistical considerations related land acquisition,</u> sSites selected for restoration would be dependent on the location and design of the 42 selected conveyance pathway and operations for the through-Delta component of the dual 43 conveyance facility.”   | Text not modified. Land acquisition is a global issue related to implementation of restoration in all of the ROAs.   |
| 214 | 3-99   | 3.4.2.2   | 3-98:<br>44<br>throu<br>gh<br>3-99:<br>2 | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “Selected sites would be those that would provide substantial species 44 and ecosystem benefits with the selected through-Delta conveyance configuration and 1 most effectively avoid adverse affects of south Delta SWP/CVP operations.”)<br><br><i>Comment: As done elsewhere in conservation strategy, consider here providing a cross-reference to water operation CMs related to S. Delta operations, hydrodynamic and habitat conditions, etc.</i> | Text not modified. Text will be modified to indicate the final proposed relevant operations when selected.   |
| 215 | 3-100  | 3.4.2.2   | 11-18                                    | Justin Fredrickson<br>California Farm Bureau Federation | (Re: Problem Statements.)<br><br><i>Comment: As a general comment on current formatting of Chapter 3, for readability and logical flow, awkward to have problem statement so far into preceding discussion. Consider perhaps putting problem statements and hypotheses ahead of CM specifics, just after initial topic description.</i>   | Order of problem statements following conservation measure statements has not been modified. Preceding text, however, has been modified to reduce amount of text with reorganization of conservation measure descriptions. |
| 216 | 100    |           | 40                                       | Various DWR   | Expanded habitat available for Suisun aster, Delta mudwort, and Delta tule pea also   | Text has been modified to address this comment.  |
| 217 | 3-100  | 3.4.2.2   | 41                                       | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Giant garter snake use of tidal marsh is somewhat dubious. Until it’s been established that they occur in this habitat, I don’t know if it’s wise to claim that creation or restoration of this habitat type will benefit this species.   | Text not modified. The current giant garter snake habitat model reviewed by DFG and USFWS indicates  |

|     | Page # | Section # | Line # | Commenter   | Comment   | Disposition  |
|-----|--------|-----------|--------|---|---|--|
|     |        |           |        |   |   | that tidal wetlands support its habitat. If tidal wetlands removed as a result of BDCP actions could adversely affect the species, then restoration of tidal wetlands within the species range would be considered to benefit the species. |
| 218 | 101    |           | 24     | Various DWR   | Expanded habitat available for Suisun aster, and Delta tule pea also  | Text has been modified to address this comment.  |
| 219 | 3-101  | 3.4.2.2   | 24-26  | Laura Patterson DWR<br>Kate Brooks DWR                  | Increasing the extent of habitat for these species will not achieve a reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on lines 10-12 should be re-written.  | Text has been modified to address this comment.  |
| 220 | 101    |           | 27     | Various DWR   | Should not be bulleted  | Text has been modified to address this comment.  |
| 221 | 3-101  | 3.4.2.2   | 27-29  | Justin Fredrickson<br>California Farm Bureau Federation | “Restoring freshwater intertidal marsh and shallow subtidal aquatic habitats in the 27 West Delta ROA is also believed to reduce the adverse effects of stressors related to 28 food and habitat availability for the covered species by:”<br><br><i>Note: This text, as start of separate set of bullets addressing the “West Delta,” should be flush with margin, not a bullet point.</i>         | Text has been modified to address this comment.  |
| 222 | 3-101  | 3.4.2.2   | 27-29  | Laura Patterson DWR                                     | Shouldn’t be bulleted.  | Text has been modified to address this comment.  |
| 223 | 3-101  | 3.4.2.2   | 27-29  | Kate Brooks DWR   | Shouldn’t be bulleted.  | Text has been modified to address this comment.  |
| 224 | 3-101  | 3.4.2.2   | 32-36  | Justin Fredrickson<br>California Farm Bureau Federation | “improving future rearing habitat areas for delta smelt and longfin smelt within the 32 anticipated eastward movement of the low salinity zone with sea level rise. Lands 33 within the West Delta ROA (see Figure 3.1) represent the only suitable locations to implement 34 intertidal marsh restoration within the anticipated future location of the low salinity 35 zone with sea level rise;” | Text has been modified to clarify the intent of the statement.   |
| 225 | 102    |           | 9      | Various   | Expanded habitat available for Suisun aster, Delta mudwort, and Delta   | Text has been modified to  |

|     | Page # | Section # | Line # | Commenter   | Comment   | Disposition                                     |
|-----|--------|-----------|--------|---|---|---|
|     |        |           |        | DWR   | tule pea also   | address this comment.                           |
| 226 | 3-102  | 3.4.2.2   | 9-10   | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Increasing the extent of habitat for these species will not achieve a reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on page 3-101 lines 27-29 should be re-written. | Text has been modified to address this comment. |
| 227 | 102    |           | 11     | Various<br>DWR  | Should not be bulleted  | Text has been modified to address this comment. |
| 228 | 3-102  | 3.4.2.2   | 11-13  | Justin Fredrickson<br>California Farm Bureau Federation | Again, this text should be flush to margin as start of separate section on the "South Delta."   | Text has been modified to address this comment. |
| 229 | 3-102  | 3.4.2.2   | 11-13  | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Shouldn't be bulleted.  | Text has been modified to address this comment. |
| 230 | 102    |           | 24     | Various<br>DWR  | Expanded habitat available for Delta mudwort and Delta tule pea also  | Text has been modified to address this comment. |
| 231 | 3-102  | 3.4.2.2   | 25     | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Increasing the extent of habitat for these species will not achieve a reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on 11-13 should be re-written.                  | Text has been modified to address this comment. |
| 232 | 3-102  | 3.4.2.2   | 26-28  | Justin Fredrickson<br>California Farm Bureau Federation | Again, formatting: This paragraph should be bullet point.   | Text has been modified to address this comment. |
| 233 | 3-102  | 3.4.2.2   | 29-31  | Justin Fredrickson<br>California Farm Bureau Federation | More formatting: This one should be start of another section ("East Delta"), flush to margin.   | Text has been modified to address this comment. |
| 234 | 103    |           | 2      | Various<br>DWR  | Expanded habitat available for Suisun aster, Delta mudwort, and Delta tule pea also   | Text has been modified to address this comment. |
| 235 | 3-103  | 3.4.2.2   | 2-4    | Laura Patterson   | Increasing the extent of habitat for these species will not achieve a   | Text has been modified to                       |

|     | Page # | Section # | Line # | Commenter   | Comment  | Disposition   |
|-----|--------|-----------|--------|---|--|---|
|     |        |           |        | DWR<br>Kate Brooks<br>DWR                               | reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on page 3-102 lines 29-31 should be re-written.  | address this comment.   |
| 236 | 3-103  | 3.4.2.2   | 13-31  | Justin Fredrickson<br>California Farm Bureau Federation | <p>“export of production from brackish tidal marsh into open water of Suisun Marsh sloughs 20 and Suisun Bay in support of food for covered fish species, including delta and longfin 21 smelt; 22</p> <p>improved covered fish species habitat conditions within tidal marsh channels and 23 adjacent open water <del>by reducing</del> <u>in the form of potential reduced</u> summer/fall water temperatures <del>through</del> <u>associated with</u> nocturnal tidal 24 thermal exchange on marsh plain surfaces and reintroduction of cooled water to Suisun 25 Marsh sloughs and Suisun Bay; 26</p> | Text not modified. Text is stating intended benefits, not potential benefits. |
| 237 | 3-103  | 3.4.2.2   | 13-31  | Justin Fredrickson<br>California Farm Bureau Federation | <p>reduction of contaminants loading <del>through</del> <u>has a result of filtering of</u> contaminants from Suisun Bay or chemical 27 transformation of contaminants to less toxic/non-toxic substances; 28</p> <p>increased in Sacramento splittail spawning and rearing habitat and salmonid and sturgeon 29 rearing habitat associated with restoration of new tidal channels and shallow subtidal 30 habitats adjacent to vegetated marsh plains;”</p> <p><i>Note: See comparable changes above for text on 3-95.</i></p>  | Text has been modified to address this comment.                               |
| 238 | 104    | 3.4.2     | 20     | Various<br>DWR  | “Variable...” should not be bulleted, or following bullets should be indented further  | Text has been modified to address this comment.                               |
| 239 | 3-104  | 3.4.2.2   | 20-21  | Justin Fredrickson<br>California Farm Bureau Federation | <p>(Re: “Variables that will be considered in the design of restorations actions for brackish tidal 20 marsh habitat include the....”)</p> <p><i>Formatting. Text here should be flush to margin.</i></p>  | Text has been modified to address this comment.                               |
| 240 | 3-104  | 3.4.2.2   | 22     | Justin Fredrickson<br>California Farm Bureau            | “extent, location, and configuration of <u>other existing and proposed</u> restored tidal marsh habitat areas....”   | Text has been modified to address this comment.                               |

|     | Page # | Section # | Line # | Commenter   | Comment  | Disposition  |
|-----|--------|-----------|--------|---|--|--|
|     |        |           |        | Federation  |  |  |
| 241 | 3-104  | 3.4.2.2   | 20-30  | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: To this list of “variables” to consider in design tidal restoration actions for Suisun Marsh, please consider adding an addition bullet point, as follows: “—potential hydrodynamic and water quality effects on other areas of the Delta</i>  | Text has been modified to address this comment.  |
| 242 | 3-104  | 3.4.2.2   | 39-40  | Justin Fredrickson<br>California Farm Bureau Federation | “ <i>Hydrodynamic Conditions.</i> Restored brackish tidal marshes will be designed to provide hydrodynamic conditions similar to those described for freshwater tidal marsh. <u>In addition to desired biological and ecological attributes, the selection and design of proposed tidal brackish marsh in Suisun Marsh will need to consider potential hydrodynamic and water quality effects of the proposed restoration, including the effect on salinity intrusion, tidal mixing, and Delta salinity.</u> ”   | Text has been modified to address this comment.  |
| 243 | 3-105  | 3.4.2.2   | 14-15  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “HRCM9: Restore at least 7,000 acres of brackish tidal marsh within the Suisun Marsh Restoration Opportunity Area.”)<br><br><i>Comment / Question: Are 7,000 acres of proposed brackish tidal over and above or in addition to acreages already planned as part of Suisun Marsh Management Plan?</i>  | Text not modified. Any restoration that is implemented by or funded by the BDCP Implementing Entity for implementation by others would contribute towards the 7,000 acre target. |
| 244 | 3-105  | 3.4.2.2   | 37     | Various DWR   | Add; <b>When ever possible, restore natural remnant meandering channels.</b> Areal spectral analysis photograph can locate many hidden historic remnant channels.  | Text has been modified to address this comment.  |
| 245 | 3-106  | 3.4.2.2   | 7-12   | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “Hydrodynamic modeling conducted for the Suisun Marsh Restoration Plan (J. DeGeorge pers. 7 comm.) indicates that restoring marsh north of Montezuma Slough would shift the low salinity 8 zone westward and restoring marsh at sites adjacent to Suisun Bay would shift the low salinity 9 zone eastward, potentially adversely affecting delta smelt habitat and water quality in the west 10 Delta. Consequently, implementation of marsh restoration projects in north and south S Suisun 11 Marsh will likely be sequenced such that these potential effects would be minimized.”)<br><br><i>Comment: The modeling by DeGeorge showed adverse salinity effects</i> | Text has been modified to expand the discussion of sequencing restoration projects.  |

|     | Page #         | Section # | Line #   | Commenter  | Comment  | Disposition   |
|-----|----------------|-----------|----------|--|--|---|
|     |                |           |          |  | <i>with restoration adjacent to Suisun Bay could potentially extend well beyond to West Delta into the Central and South Delta. Conversely, however, as noted, restoration “north of Montezuma Slough” could supposedly have a comparable opposite effect and instead actually <u>reduce</u> salinity intrusion into the interior Delta. Additional modeling by the BDCP should take a thorough look at both the incremental and any cumulative and potentially interrelated, system-wide hydrodynamic and salinity effects of freshwater and tidal marsh restoration within all of the various ROAs, including the Suisun Marsh ROA. Beyond merely avoiding adverse impacts, deliberate phased restoration utilize such restoration at various strategic points within the Delta to potentially even <u>reduce</u> salinity in other portions of the Delta. At a minimum, the BDCP should look, overall, to avoid and minimize any net increase in salinity which might result from such restoration.</i>   |   |
| 246 | 3-107<br>3-109 | 3.4.2.2   | 27<br>23 | Various<br>DWR                                     | It is impossible to identify channels that serve as important rearing habitat and movement corridors, so only important regions of the Delta can be identified. Salmonids meander through the Delta is very convoluted and is influenced by factors we do not understand (there is no documentation to explain why salmonids meander as they do in the Delta). Tracking over the last few years has indicated greater densities in certain channels, but this should be taken with a grain of salt. Population size, hydrodynamic conditions, river flow volumes, water diversion volumes, water diversion points probably all have some influence on salmonid movements. So the planned changes to the Delta will have unknown profound effects on the movements of salmonids. It should also be noted that increased residency time in the Delta does expose juvenile salmonids to freshwater predation, but allows them to grow larger and survive better in the sea. In areas of the north coast (e.g. Redwood Creek, Humboldt) it was documented that when the lower river was channelized to the mouth there was a precipitous drop in the salmonid returns. | Text modified to clarify the intent of the statement. |
| 247 | 3-107          | 3.4.2.2   | 31-32    | Justin<br>Fredrickson<br>California Farm<br>Bureau | “This measure will be implemented along <u>both</u> non-Project levees within the BDCP Planning Area and <del>along</del> Project levees 31 along the San Joaquin River from Vernalis and Mossdale and along Steamboat and Sutter 32 Sloughs.”   | Text has been modified to address this comment.       |

|     | Page # | Section # | Line # | Commenter   | Comment  | Disposition   |
|-----|--------|-----------|--------|---|--|---|
|     |        |           |        | Federation  |  |   |
| 248 | 3-108  | 3.4.2.2   | 7-8    | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Increasing habitat for these species does not provide an ecological benefit for covered fish species, so the preceding sentence on page 3-107 lines 38-39 should be re-written.  | Text has been modified to address this comment.   |
| 249 | 3-108  | 3.4.2.2   | 19-20  | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR            | Maybe lines 7-8 should follow this sentence instead of residing where they do.   | Text has been modified to address this comment.   |
| 250 | 3-110  | 3.4.2.2   | 16     | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “controlling the abundance of non-native fish predators and competitors”)<br><br><i>Comment: It would seem, with the type of channel margin actions described here, that there might be at least a potential risk of increased predation (i.e., potential inadvertent creation of conditions that could favor further proliferation of non-native predators—see, e.g., page 3-114, lines 8-10) as a possible unintended consequence. (See, also, page 3-111, lines 12-14: “Preliminary evidence suggests 11 that survival of salmonids in these sloughs is lower or equal to that of the mainstem river 12 (Perry and Skalski 2008), likely due to greater predation populations relative to the 13 mainstem Sacramento River.”) Another portion of the text discusses how the inverse might also be true (i.e., a return to more of a shaded, vegetated condition could favor natives and discourage non-natives, etc.). In any case, it would seem there is probably at least a plausible case to be made as to either possible outcome, and so design and adaptive management and monitoring considerations for channel margin and riparian habitat actions should anticipate and fully consider the potential for both.</i> | Text has been modified to expand the discussion of the potential for increasing the risk of non-native predation risk.  |
| 251 | 3-110  | 3.4.2.2   | 17-20  | Justin Fredrickson<br>California Farm Bureau Federation | “To enhance channel margin habitats, the BDCP Implementing Entity would coordinate with and 17 receive approvals as appropriate from the Central Valley Flood Protection Board, California 18 Department of Water Resources, and U.S. Army Corps of Engineers to modify channel 19 characteristics along leveed waterways. <u>In addition, BDCP will actively consult and coordinate such activities with potentially affected local reclamation districts, local governments, and private landowners.</u> ”   | Text has not been modified. Text is directed at engaging entities from which regulatory approvals are required to implement channel margin restoration. BDCP will coordinate with |

|     | Page # | Section # | Line # | Commenter   | Comment  | Disposition  |
|-----|--------|-----------|--------|---|--|--|
|     |        |           |        |   |  | local governments, reclamation districts, and landowners in all aspects of its habitat restoration/enhancement programs. |
| 252 | 3-110  | 3.4.2.2   | 22     | Various DWR   | It is important that <b>sturgeon rearing</b> be mentioned here.  | Text has been modified to address this comment.  |
| 253 | 110    | 3.4.2     | 31     | Various DWR   | Should this be “leaf drop” instead of “leave”?   | Text has been modified to address this comment.  |
| 254 | 3-110  | 3.4.2.2   | 38     | Various DWR   | Why isn’t sturgeon included here? The Primary Delta Channels are the primary nursery ground for this species.  | Text has been modified to address this comment.  |
| 255 | 3-111  |           |        | National Marine Fisheries Service                       | 18. Page 3-111. The statement that up to 80% of Sacramento River water, and therefore fish, potentially moving through Sutter and Steamboat sloughs should reference preliminary modeling results for reader verification. In contrast, Perry and Skalski (2009) found the proportion of fish entering migration route did not necessarily agree with proportion of mean discharge entering a route.<br><br>Perry, R.W. and J.R. Skalski. 2009. Survival and migration route probabilities of juvenile Chinook salmon in the Sacramento-San Joaquin River Delta during the winter of 2007-2008. Final report submitted to US Fish and Wildlife Service. July 15, 2009. 54 pages. | Text has been modified to address the comment.   |
| 256 | 3-111  | 3.4.2.2   | 5-7    | Justin Fredrickson<br>California Farm Bureau Federation | “Preliminary 5 evidence indicates that juvenile salmonids enter these sloughs in <del>proportion</del> <u>rough proportion</u> to the 6 amount of water entering these sloughs (Perry and Skalski 2008).”  | Text has been modified to address this comment.  |
| 257 | 111    | 3.4.2     | 13     | Various DWR   | “predation” should be “predator”   | Text has been modified to address this comment.  |
| 258 | 3-111  | 3.4.2.2   | 31     | Various DWR   | “This reach of river...important <b>spawning</b> habitat...” It appears that this should read <b>rearing</b> habitat since floodplain would not be salmonid spawning habitat.  | Text has been modified to address this comment.  |
| 259 | 112    | 3.4.2     | 7      | Various DWR   | Should this be “leaf drop” instead of “leave”?   | Text has been modified to address this comment.  |

|     | Page # | Section # | Line # | Commenter  | Comment   | Disposition   |
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| 260 | 3-112  | 3.4.2.2   | 13-14  | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR                     | Increasing the extent of habitat for these species will not achieve a reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on page 3-111 lines 35-37 should be re-written.   | Text has been modified to address this comment.   |
| 261 | 114    | 3.4.2     | 18     | Various<br>DWR   | Should this be “leaf drop” instead of “leave”?  | Text has been modified to address this comment.   |
| 262 | 3-115  | 3.4.2.2   | 15     | Various<br>DWR   | It should be noted here and in other sections on the floodplain, that improving fish passage at Fremont Weir will also decrease delay times.  | Text has been modified to remove reference to Fremont Weir. Yolo Bypass actions are not part of this measure.   |
| 263 | 3-116  | 3.4.2.2   | 10     | Various<br>DWR   | Avg depth of 2 ft may not be an appropriate target. Citation? I believe Ted Sommer’s work used $\leq 2$ meters depth.   | Text has been modified for clarity.   |
| 264 | 3-117  | 3.4.2.2   | 27     | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “Floodplain habitat would be restored along the sections of river that would provide the most species and ecosystem benefits.”  | Text has been modified to address this comment.   |
| 265 | 3-118  | 3.4.2.2   | 23     | Various<br>DWR   | Allowing the river to naturally meander is one of the best things we can do to it, but since the system is now sediment starved where will the river acquire the materials for the sediment deposition portion of a meander? The eroded materials will also benefit the downstream Delta if dredging is more restricted.  | Text not modified. The river would be allowed to erode material from existing channel banks within the expanded floodplain.   |
| 266 | 3-121  | 3.4.3     | 30-36  | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | (Re: “These 31 measures may or may not be considered part of the basis of a determination about the sufficiency 32 of the plan in achieving the goals and objectives of the BDCP or meeting regulatory 33 requirements under the ESA or the NCCPA. However, they reflect the ongoing, active 34 commitment to a broad-based conservation program that will yield substantial additional benefits 35 to listed species and their habitats over the long-term.”)<br><br><i>Comment: The intent behind these statements is clear enough. How this works in regulatory and permitting terms, however, needs clarification, development, and/or deliberation as a part of the BDCP’s on-going planning process. Specifically, if there is no assumed</i> | Text not modified. The issues raised by the comment are being addressed in discussion with the Fishery Agencies, the results of which will be reflected in subsequent drafts. |

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|     |        |           |         |  | <i>conservation benefit for purposes of crediting under an eventual regulatory permit, this would of course raise the question of whether they are worth doing. Perhaps what is needed is some clearer indication and upfront commitment from the permitting agencies as to which of the proposed other stressors measures these agencies see as actually creditable actions worth further developing, pursuing, and committing financial resources to.</i> |   |
| 267 | 3-119  | 3.4.2.2   | 26-28   | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR                     | Increasing the extent of habitat for these species will not achieve a reduction in the adverse effects of stressors related to food and habitat availability for the covered fish species, so the preceding paragraph on page 3-118 lines 32-35 should be re-written.   | Text has been modified to address this comment.   |
| 268 | 3-123  | 3.4.3     | 34-35   | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “which are designed to protect beneficial uses and 34 meets the US EPA aquatic criteria for ammonia/um...”  | Text has been modified to address this comment.   |
| 269 | 3-129  | 3.4.3     | 22-23   | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | “If effluent-derived ammonia and ammonium ions are found...”  | Text has been modified to address this comment.   |
| 270 | 3-133  | 3.4.3     | 5, 9-17 | Various<br>DWR   | “Actions that will be supported” → “Actions that <i>could</i> be supported.” DWR has not embraced this proposed responsibility, and the draft TMDL is undergoing additional modification. Delete lines 9-17. – OR – see comment 17  | Text not modified. This conservation measure presents BDCPs proposed conservation measure. The measure will be modified as appropriate to address any future revisions to the TMDL. |
| 271 | 3-133  | 3.4.3     | 4-24    | Various<br>DWR   | Delete itemization of actions altogether, and replacing with language ~ “Funding will support a portion of DWR obligations under the CVRWQCB TMDL, when finalized.”   | Text not modified. This is a BDCP conservation measure. Funding responsibilities for implementing BDCP conservation measures are  |

|     | Page # | Section # | Line #                      | Commenter   | Comment   | Disposition  |
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|     |        |           |                             |   |   | not addressed in Chapter 3.  |
| 272 | 3-133  | 3.4.3     | 11,14,17                    | Various DWR   | Cost estimates are grossly low.   | Text not modified. Development of cost estimates is ongoing. Comment does not provide alternative cost estimate.   |
| 273 | 3-133  | 3.4.3     | 25                          | Various DWR   | Delete "In addition". The measures in the preceding lines may be necessary to offset the habitat restoration conservation measures.   | Text not modified. The proposed conservation measure would be implemented independent of restoration measures.   |
| 274 | 3-133  | 3.4.3     | 25-27                       | Justin Fredrickson<br>California Farm Bureau Federation | (Re: "In addition, the BDCP Implementing Entity will minimize to the extent practicable any increase 25 in mercury methylation associated with habitat restoration conservation measures through the 26 design and implementation of restoration projects (see Section 3.4.2).")<br><br><i>Comment: How will the BDCP do this? It is not clear from the current text how this will occur.</i>                                 | Section 3.4.2 text has been modified in relevant locations to address mercury methylation associated with habitat restoration.   |
| 275 | 3-133  | 3.4.3     | 3-133: 31 through 3-134: 39 | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: The "Problem Statement" section on methylmercury does not explain that anaerobic conditions in restored wetlands and successive wetting and drying of floodplain areas are thought to potentially accelerate and exacerbate methylation of elemental mercury. This would seem an important point given the central place that wetlands and floodplain restoration occupy in the BDCP's conservation strategy.</i> | Section 3.4.2 text has been modified in relevant locations to address mercury methylation associated with habitat restoration. Problem statement is not modified because this is not a measure to mitigate effects of mercury methylation that may be associated with BDCP restoration/enhancement actions but is a measure to reduce mercury loads from existing sources. |
| 276 | 133    | 3.4.3     | 34                          | Various   | Add to end of sentence: "...manifested effects in upper-trophic-level   | Text has been modified to  |

|     | Page #                    | Section # | Line #                                  | Commenter  | Comment   | Disposition  |
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|     |                           |           |   | DWR  | organisms”.<br>Add to paragraph: “Tidal marsh sediments may have elevated methylmercury production relative to those in unvegetated open-water areas (Marvin-DiPasquale et al. 2003)”.<br><b>Reference:</b><br>Marvin-DiPasquale, M. D., J. L. Agee, R. M. Bouse, B. E. Jaffe. 2003. Microbial cycling of mercury in contaminated pelagic and wetland sediments of San Pablo Bay, California. Environmental Geology 43:260–267  | address this comment.  |
| 277 | 3-134                     | 3.4.3     | 23-28                                   | Laura Patterson<br>DWR<br>Kate Brooks<br>DWR                     | I don’t know if any work on them (or another aquatic snake species) has been done, but giant garter snakes eat primarily fish and frogs, so it seems logical that they, too, could be impacted by methylmercury poisoning.  | Text not modified.<br>Possibility for effects on giant garter snake is provided for in existing text.  |
| 278 | 3-135<br>through<br>3-139 | 3.4.3     | 3-135:<br>30<br>through<br>3-139:<br>26 | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | <i>Comment: Overall, while the California Farm Bureau Federation appreciates the changes made to the conservation measures in response to comments, we are still not comfortable with conservation measure OSCM4 (“Reduce the Load of Agricultural Pesticides and Herbicides Entering Delta Waterways...”) as a whole, to the extent it proposes to expand on an existing regulatory program with potential, third-party economic consequences for a sizeable segment of our statewide membership and, also, to the extent we believe it relies prematurely on source control activities, without first establishing any strong casual link to agricultural pesticides and herbicides in the Delta. To the extent, the BDCP permitting process decides to eventually move forward with actual implementation of this measure, we would stress the need for significant on-going outreach to potentially affected landowners, County Agricultural Commissioners, and existing watershed coalitions and individual dischargers under the Regional Board’s IRLP.</i> | Text not modified. To implement the conservation measure, it is anticipated that the Implementing Entity would need to coordinate closely with landowners and relevant entities. The effectiveness of this conservation measure in achieving the biological goals and objectives will be determined through monitoring. Depending on monitoring results, this measure could be modified through the adaptive management process to improve its effectiveness (e.g., if monitoring indicates casual linkages differ from those hypothesized). |

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| 279 | 3-136  |           |        | National Marine Fisheries Service                       | 17. Page 3-136. In order to verify actual reduction in contaminant loads a simplified semiannual reports from the water control board should be provided   | Text not modified. Effectiveness of the measure will be monitored and documented in monitoring reports.                                  |
| 280 | 3-136  | 3.5.10    | 27     | Various DWR   | Consider biannual or every 3- or 5-years reporting so not all staff effort is spent on it. This would also allow researchers more synthesis of results.  | Text not modified. There is no reference to reporting periods. Reporting requirements will be addressed in MOAs and the monitoring plan. |
| 281 | 3-136  | 3.4.3     | 34-37  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “Supporting partnerships between research universities, the California Farm Bureau 34 Federation, farmer coalitions, the California Department of Pesticide Regulation, and 35 other interested agencies and organizations for exchange of newly acquired information 36 regarding pesticides and other aspects of integrated pest management....”)<br><br><i>Comment: While we look forward to opportunities for on-going input on any further development or implementation of this OSCM4 (Agricultural Pesticides and Herbicides), as noted above, the California Farm Bureau Federation has significant reservations concerning the general scope and nature of the measure itself and, so, would prefer that the drafters omit any reference to our organization by name, to the extent that might be construed to imply general endorsement of the proposed approach or the measure itself.</i> | Text has been modified to address this comment.  |
| 282 | 3-138  | 3.4.3     | 30-36  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: “Although pesticides and herbicides are effective at eliminating weeds and 30 pests on agricultural crops, they are also highly toxic to plants and animals in the 31 aquatic environment, particularly to crustaceans, which are closely related to insects 32 (Weston et al. 2005). Amweg et al. (2006) found pyrethroid concentrations at toxic 33 levels to <i>Hyallela azteca</i> in many agriculture-dominated waterbodies in the Central 34 Valley. All these covered fish species consume crustaceans (e.g., copepods, 35 amphipods, mysid shrimp) in the Delta or downstream bays for at least part of their 36 lives.”)   | Text has been modified to ensure consistency among the two measures.   |

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|     |                     |           |                           |   | <i>Comment: However, as separately noted under OSCM5, on page 3-141, at lines 7 through 9, recent research by Dr. Weston of UCD has established that urban sources of pyrethroid pesticides in and immediately upstream of the Delta are likely of far greater biological concern than agricultural sources. Some acknowledgement of this finding in the discussion of this conservation measure is needed.</i> |   |
| 283 | 3-141               | 3.4.3     | 7-9                       | Justin Fredrickson<br>California Farm Bureau Federation | (Re: "Weston et al. 7 (2009) found that residential runoff is a larger source of pyrethroid pesticides than 8 agricultural runoff.")<br><br><i>Comment: This point should be included in OSCM4 ("Reduce the Load of Agricultural Pesticides and Herbicides....") as well.</i>   | Text has been modified to ensure consistency among the two measures.  |
| 284 | 3-142 through 3-143 | 3.4.3     | 3-142: 4 Through 3-143: 6 | Justin Fredrickson<br>California Farm Bureau Federation | " <del>Once</del> If spring-44 run Chinook salmon are re-established in the San Joaquin River under the San Joaquin 45 River Litigation Settlement, <u>as planned</u> , dissolved oxygen sags in the Deep Water Ship Channel will likely have similar effects on this run if sags were to occur during their adult migration 2 period (expected to be approximately March-September)."                          | Text has not been modified. Conservation measure recognizes the firm intent of the Settlement to reestablish the run and merely states the benefits of the measure for that run once it is established. |
| 285 | 3-145               |           | 30                        | Various DWR   | Add ", to be operated intermittently, " after "locations..."  | Text not modified. The duration or season of operations has not been determined.  |
| 286 | 3-145               |           | 36                        | Various DWR   | Add a period after "...3.6)"  | Text has been modified to address this comment.   |
| 287 | 3-145               |           | 39                        | Various DWR   | Replace ", although" with ", however, so"   | Text not modified. Intent of text is clear.   |
| 288 | 3-145               |           | 45                        | Various DWR   | change "laptops" to "laptop computers" (global?)  | Text has been modified to address this comment.   |
| 289 | 3-147               |           | 9                         | Various DWR   | "estimated" not "estimate" (add "d")  | Text has been modified to address this comment.   |
| 290 | 3-147               |           | 21                        | Various DWR   | change "in" to "on" and add a comma at end of line 21   | Text has been modified to address this comment.   |
| 291 | 3-147               |           | 27-28                     | Various   | Should there be some "policy" direction here limiting obligation --   | Text not modified. The  |

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|     |        |           |        | DWR         | maybe the "first three" additional wash stations?  | extent of the obligation will be set by the extent of funding.   |
| 292 | 3-149  |           | 7      | Various DWR | Delete "de" at beginning of line; delete "to these wash stations"                              | Text has been modified to address this comment.  |
| 293 | 3-149  |           | 15     | Various DWR | GLOBAL comment: seems the "Problem Statement" and "Hypotheses" should PRECEDE the "OSCMxx"?    | Text not modified. Chapter 3 presents conservation measures. Problem statements and hypothesis justify the measures. |
| 294 | 3-149  |           | 19-20  | Various DWR | Sentence incomplete -- missing word or clause ("initiated"? "have been deployed"? maybe both?) | Text has been modified to address this comment.  |
| 295 | 3-149  |           | 23     | Various DWR | Add "established" after "already..."   | Text has been modified to address this comment.  |
| 296 | 3-149  |           | 24     | Various DWR | Add "these and other" after "of..."  | Text not modified. No specific species are modified by the suggested text change.                                    |
| 297 | 3-149  |           | 26     | Various DWR | Delete "into the Delta"  | Text has been modified to address this comment.  |
| 298 | 3-149  |           | 28     | Various DWR | Add "mussel-" or "quagga/zebra-" (no space) before "infested"                                  | Text has been modified to address this comment.  |
| 299 | 3-149  |           | 33     | Various DWR | Add "the likelihood of" after "reduce..."  | Text not modified. Statement is qualified by "could".  |
| 300 | 3-150  |           | 1      | Various DWR | Delete "a" and make "position" plural (positions)  | Text not modified. There is only a half time position for outreach.  |
| 301 | 3-150  |           | 8      | Various DWR | Period after "Delta"; change "although" to "However,"  | Text has been modified to improve readability.   |
| 302 | 3-150  |           | 8-10   | Various DWR | Change "effects to "impacts" (3 times)   | Text has been modified throughout to ensure consistent use of "effects".   |
| 303 | 150    | 3.4.3     | 23     | Various     | Invasive <i>Corbula</i> also may accumulate higher concentrations of metals                    | Text has been modified to  |

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|     |        |           |        | DWR         | such as selenium (Se) and Cadmium (Cd) leading to increased contaminant bioavailability in bay/delta food webs. According to Linville et al. (2002), the dominant bivalve community in the 1990s ( <i>Corbula</i> ) had 3x higher Se concentrations than the dominant community before the 1986 <i>Corbula</i> invasion. <i>Corbula</i> also accumulated greater percentages of trophically available Cd than <i>Macoma bathica</i> (Wallace and Luoma 2003).<br><b>References:</b><br>Linville, R. G., S. N. Luoma, L. Cutter, and G. A. Cutter. 2002. Increased selenium threat as a result of invasion of the exotic bivalve <i>Potamocorbula amurensis</i> into the San Francisco Bay-Delta. <i>Aquatic Toxicology</i> 57:51-64.<br>Wallace, W. G., and S. N. Luoma. 2003. Subcellular compartmentalization of Cd and Zn in two bivalves. II. Significance of trophically available metal (TAM). <i>Marine Ecology Progress Series</i> 257:125-137. | include bioaccumulation.  |
| 304 | 3-150  |           | 24     | Various DWR | [GLOBAL] Are you sure you don't want to use "listed" instead of "covered"?  | Text not modified. The Conservation Strategy addresses covered species, some of which are listed. |
| 305 | 3-150  |           | 34,38  | Various DWR | Add comma after both "Entity" and "Agencies"  | Text not modified. Style preference.  |
| 306 | 3-150  |           | 39     | Various DWR | [GLOBAL] since "deobligated" is not a real word, you've probably thought about alternatives? "Unobligated" is only a little better; consider "de-" or "dis-"?   | Text not modified. This is a word.  |
| 307 | 3-150  |           | 45     | Various DWR | Add "new (proposed)" before "DFG"   | Text not modified. The program has been identified by DFG.  |
| 308 | 3-151  |           | 4      | Various DWR | This sentence is redundant, and/or should BEGIN this paragraph  | Text has been modified to address this comment.   |
| 309 | 3-151  |           | 13     | Various DWR | Change "The" to "This volunteer..."   | Text not modified. Statement refers to the network.   |
| 310 | 3-151  |           | 14     | Various DWR | Add comma after "nature"  | Text has been modified to address this comment.   |

|     | Page #               | Section # | Line # | Commenter                                       | Comment  | Disposition   |
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| 311 | 3-151                |           | 22     | Various DWR                                     | Is "infaunal" a real word?!  | Text not modified. This is a word.  |
| 312 | 3-151                |           | 27     | Various DWR                                     | Beginning with "to..." put either 2 or 4 words in parentheses  | Text not modified. Style preference.  |
| 313 | 3-152                |           | 14     | Various DWR                                     | Suggest "well-established" be hyphenated   | Text not modified. Style preference.  |
| 314 | 3-152                |           | 25-29  | Various DWR                                     | This lengthy sentence is AWK; change "results in" to "yields"  | Text has been modified for clarity.   |
| 315 | 3-153                |           | 2      | Various DWR                                     | " <i>Egeria densa</i> " should be italic or underlined   | Text has been modified to address this comment.   |
| 316 | 3-153                |           | 26     | Various DWR                                     | Change "widest spread" to "most widely distributed"  | Text not modified. Style preference.  |
| 317 | 3-153                |           | 35,36  | Various DWR                                     | Do your citations use "covered"? Would "listed" or "native" be better?   | Text not modified. The Conservation Strategy addresses covered species, some of which are listed.       |
| 318 | 3-155                | 3.4.3     | 11-15  | Greg Gartrell<br>Contra Costa<br>Water District | Please update the effectiveness of the existing DBW EDCP. Have the changes proposed in 2006 been implemented? Since previous programs have not been very successful in controlling SAV, it is important to emphasize how the proposed program would be different and more effective. | The text has been modified to include the most current available information.                           |
| 319 | 3-155                |           | 16     | Various DWR                                     | " <i>Egeria densa</i> " should be italic or underlined   | Text has been modified to address this comment.   |
| 320 | 3-155                |           | 23     | Various DWR                                     | End line with colon instead of period  | Text not modified. Style preference.  |
| 321 | 3-155<br>to<br>3-156 | 3.4.3     |        | Greg Gartrell<br>Contra Costa<br>Water District | Hypothesis 5 contradicts hypotheses 2 & 3. If removing SAV will increase turbidity and phytoplankton are light limited already, removing SAV may actually reduce light available to phytoplankton.   | Text has been clarified to indicate that SAV blocks more light than anticipated increases in turbidity. |
| 322 | 3-156                |           | 3      | Various DWR                                     | Add possessive apostrophe after "species" (species')   | Text has been modified to address this comment.   |
| 323 | 3-156                |           | 6      | Various DWR                                     | Suggest "light-limited" be hyphenated  | Text has been modified to address this comment.   |
| 324 | 3-156                |           | 8-10   | Various   | This clause is AWK   | Text has been modified for  |

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|     |        |           |        | DWR   |  | clarity.   |
| 325 | 3-156  |           | 14     | Various DWR   | Add "and" after "monitoring"   | Text has been modified to address this comment.  |
| 326 | 3-156  |           | 20     | Various DWR   | Sentence is AWK; delete EITHER "reducing" or "controlling"   | Text has been modified for clarity.  |
| 327 | 3-156  |           | 35     | Various DWR   | Put "hot spots" (with quotation marks) INSIDE parentheses, with the period AFTER the closing paren...  | Text not modified. Style preference.   |
| 328 | 3-156  |           | 38     | Various DWR   | Delete extra space after "C"   | Text has been modified to address this comment.  |
| 329 | 3-157  |           | 9      | Various DWR   | Delete "meaningful"; add "significantly" after reduced and add "beneficial" after "level"  | Text has been modified for clarity.  |
| 330 | 3-157  |           | 12-13  | Various DWR   | This is not a sentence -- there is no idea here.   | Text has been modified for clarity.  |
| 331 | 3-157  |           | 15     | Various DWR   | Change "pilot program." to "summary analysis and report."  | Text not modified. Style preference.   |
| 332 | 3-157  |           | 18     | Various DWR   | Suggest "other stressors program" be in quotation marks, otherwise sentence is AWK. On other pages, initial capitals are used (Other Stressors) to convey program meaning.   | Text has been globally modified for consistency. "Other stressors" is a BDCP-specific term.                        |
| 333 | 3-157  |           | 20     | Various DWR   | Suggest "other stressors conservation measures" be in q-marks  | Text has been globally modified for consistency.   |
| 334 | 3-157  |           | 21     | Various DWR   | "selected" would be better word than "identified"?   | Text not modified. Style preference.   |
| 335 | 3-157  | 3.4.3     | 23-33  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: " <b>Problem Statement.</b> Despite the decline of multiple native species in the Delta over the 23 past few years, such as delta smelt (IEP 2008a), longfin smelt (IEP 2008a), and salmon 24 (MacFarlane et al. 2008), the abundance of non-native centrarchids such as large mouth 25 bass have increased in association with increases in Egeria abundance (Brown and 26 Michniuk 2007). Non-native centrarchids, particularly largemouth bass and black 27 crappie, in the Delta consume juvenile salmonids and splittail, although the effect on 28 smelt and sturgeon in the Delta may be minor due to their use of different locations in the 29 water column (M. Nobriga pers. comm.). Striped bass in the Delta are known to 30 consume juvenile salmonids, delta and longfin smelt, and | Text has been modified to clarify the hypothesized magnitude of non-native fish predation on covered fish species. |

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|     |        |           |        |             | <p>splittail (Stevens 1966, ODFW 31 1998, Nobriga and Feyrer 2007, 2008). The impact of non-native basses on juvenile 32 sturgeon is likely small in the Delta.”)</p> <p><i>Comment: The problem statement here should attempt to give some estimate of the magnitude of the problem of non-native predation Delta-wide and for the various covered species (pelagic, anadromous, and any others). Is there scientific literature that has attempted to quantify the impact of non-native predation on the various species and in the various areas of the Delta?</i></p> |  |
| 336 | 3-157  |           | 25     | Various DWR | "largemouth is one word   | Text has been modified for clarity.  |
| 337 | 3-157  |           | 26     | Various DWR | "Egeria" should be italic or underlined   | Text has been modified for clarity.  |
| 338 | 3-157  |           | 28     | Various DWR | Move "in the Delta" to between "Centrarchids" and the comma on the previous line  | Text has been modified for clarity.  |
| 339 | 3-158  |           | 24     | Various DWR | Suggest "effectiveness-monitoring" be hyphenated; add "if" to end of line   | Text modified to add missing word. Effectiveness monitoring is not hyphenated. |
| 340 | 3-158  |           | 41     | Various DWR | Initial capital for "Warden"  | Text not modified. Style preference.   |
| 341 | 3-158  |           | 42     | Various DWR | Delete "field" and change to initial capital for "Warden"   | Text not modified. Style preference.   |
| 342 | 3-158  | 3.4.3     | 42     | Various DWR | Add the word “existing” to this sentence... so that it more accurately states the facts. So it should read as follows “ ...in support of the ‘existing’ field wardens assigned to ...(DBEEP)”   | Text has been modified for clarity.  |
| 343 | 3-159  |           | 1      | Various DWR | "2009 dollars" on same line as "without inflation" is an oxymoron   | Text has been modified for clarity.  |
| 344 | 3-159  |           | 4      | Various DWR | Hyphenate and initial capital: "10-Warden..."   | Text modified to include hyphen.   |
| 345 | 3-159  |           | 5,8,18 | Various DWR | Change "on" to "against"  | Text not modified. Style preference.   |
| 346 | 3-159  |           | 6      | Various     | Insert "the State" after "by" AND give "Water Contractors" initial-   | Text has been modified for   |

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|     |        |           |        | DWR   | capitals.   | clarity.   |
| 347 | 3-159  |           | 11     | Various DWR   | Initial capitals for "Game Warden..."   | Text not modified. Style preference.   |
| 348 | 3-159  |           | 12     | Various DWR   | Initial capital for "Wardens"; hyphen after "hot-" (delete space)   | Text not modified. Style preference.   |
| 349 | 3-159  |           | 17     | Various DWR   | De-capitalize "bays"  | Text has been modified to address this comment.  |
| 350 | 3-159  |           | 28     | Various DWR   | Start sentence with "Respective" (de-capitalize "magnitudes")   | Text not modified. Style preference.   |
| 351 | 3-159  |           | 35     | Various DWR   | Add comma to end of line (after "on")   | Text has been modified to address this comment.  |
| 352 | 3-159  |           | 39     | Various DWR   | Delete "a set"  | Text has been modified to address this comment.  |
| 353 | 3-160  |           | 13, 15 | Various DWR   | Suggest "other stressors program" be in quotation marks. On other pages, initial capitals are used (Other Stressors).   | Text has been globally modified for consistency.   |
| 354 | 3-160  |           | 14     | Various DWR   | Suggest using "management" instead of "managing"  | Text has been modified to address this comment.  |
| 355 | 3-160  | 3.4.3     | 21-24  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: " <b>Hypotheses.</b> This conservation measure would establish legal limits for splittail based on 21 known abundance and harvest rates. Although harvest is not thought to have significant 22 effects on the population currently, this measure is expected to protect the species if 23 harvest pressure were to increase in the future.")<br><br><i>Comment: If there is harvest of splittail is not believed to have any significant effect on the species and this benefit is, rather, speculatively based on the possibility that it might occur or become a significant problem in the future, it may the BDCP resources and efforts would be better expended elsewhere.</i> | Text is not modified. The conservation measure includes a study to determine the magnitude of harvest and its likely effects on splittail populations. |
| 356 | 3-160  | 3.4.3     | 26-37  | Justin Fredrickson<br>California Farm Bureau Federation | (Re: "increase the population abundance of Sacramento splittail (Moyle et al. 2004, DFG 26 Creel Data 2007-08, USBR 2008, Appendix X, <i>DRERIP Evaluations</i> ). By reducing 27 the number of fish being harvested, more fish can survive to reproduce. 28 improve the transfer of energy through the foodweb in wetter years. Splittail are 29 highly fecund in wetter years (Sommer et al. 1997, Feyrer et al. 2007b). It is thought 30 that a large number of larval and juvenile splittail during   | Text not modified. Citations supporting the hypotheses are provided.   |

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|     |                     |           |                            |   | <p>these years are consumed by 31 other organisms, thus contributing to an increase in the transfer of energy through the 32 foodweb (Appendix X, <i>DRERIP Evaluations</i>). 33<br/>           increase predation on Corbula(Appendix X, <i>DRERIP Evaluations</i>).<br/>           Because splittail 34 have been shown to consume Corbula (Feyrer et al. 2003), it is hypothesized that an 35 increase in the splittail population would lead to an increased consumption of 36 Corbula.”)</p> <p><i>Comment: These hypothesized benefits appear to be highly speculative nature.</i></p> |   |
| 357 | 160                 | 3.4.3     | 34                         | Various DWR   | See comment above about potential for increased contaminant bioavailability in Corbula.  | Text not modified. Not relevant to topic.   |
| 358 | 3-160               |           | 34-37                      | Various DWR   | "Corbula" should be italic or underlined (3 occurrences)   | Text has been modified to address this comment.   |
| 359 | 3-161 through 3-163 | 3.4.3     | 3-161: 4 through 3-163: 15 | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: Beyond mere preparation and assistance with implementation of plans many of which appear to be in various stages of completion and/or implementation already, what about the prospect of actually, possibly upgrading and/or expanding antiquated, existing 1950s and 1960s era facilities to enable more sophisticated and environmentally sustainable hatchery operations and improved mitigation for legacy impacts of existing dams?</i>   | Text not modified. Efficacy of salmonid fish hatchery production is not a BDCP objective. |
| 360 | 3-161               |           | 9; 41                      | Various DWR   | Suggest "hatchery-reared" be hyphenated  | Text has been modified to address this comment.   |
| 361 | 3-161               |           | 12                         | Various DWR   | Delete "of California"   | Text has been modified to address this comment.   |
| 362 | 3-161               |           | 19                         | Various DWR   | Initial capital for "Departmental" (if refers to DFG)  | Text has been modified to address this comment.   |
| 363 | 3-161               |           | 26-29                      | Various DWR   | VERY AWK -- not all items listed are "impacts" (nor "efforts")   | Text has been modified for clarity.   |
| 364 | 3-162               |           | 9                          | Various DWR   | After "required" add "under existing..." ([What?] "conservation measures"? "Biological Opinions"? "Recovery Planning"?)  | Text has been modified for clarity.   |
| 365 | 3-162               |           | 10                         | Various DWR   | Delete "The" and "provides"; start sentence with "Following"and add "is" after "Following"   | Text not modified. Style preference.  |
| 366 | 3-162               |           | 16                         | Various   | Delete EITHER "by" or "in"   | Text has been modified for  |

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|     |                               |           |   | DWR   |   | clarity.   |
| 367 | 3-162                         |           | 18  | Various DWR   | Replace "in-house [CFS] review." with "in development by consultant staff."   | Text has been modified to address this comment.  |
| 368 | 3-162                         |           | 30  | Various DWR   | Change "process to "progress" (?)   | Text not modified. Style preference.   |
| 369 | 3-163                         |           | 11  | Various DWR   | Add comma after both "Entity" and "Agencies"  | Text not modified. Style preference.   |
| 370 | 3-163<br>throu<br>gh<br>3-164 | 3.4.3     | 3-<br>163:<br>16<br>Throu<br>gh<br>3-<br>165:<br>14 | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: Along with FAV/SAV removal, Deltawide predator and invasive species control, non-physical barriers, an expanded smelt and longfin smelt hatchery program, ammonia research and potential control in relation to major urban outfalls, and Stockton Deep Water Ship Channel low DO control measures, this proposed 100 percent mark-select fishery measure is an action that would clearly reap enormous benefits by reducing uncertainty and improving management and scientific knowledge and reducing direct and indirect mortality of wild salmon. Farm Bureau strongly encourages the BDCP to pursue aggressive basinwide implementation of this measure.</i> | The California Farm Bureau Federation's support of this measure is appreciated.                          |
| 371 |                               |           |   | National Marine Fisheries Service                       | 13. Please see attached memorandum dated June 16, 2009 with subject heading "Implications of mass marking and mark-selective fisheries for California's natural and hatchery salmon stocks" for NMFS' concerns regarding the mark-select fishery conservation measure (Attachment #1).  | Text has been modified to incorporate concerns into the explanatory text of this measure as appropriate. |
| 372 | 3-163                         |           | 32,33   | Various DWR   | "datasets" can be one word if you want (also line 37-38)  | Text has been globally modified for consistency.   |
| 373 | 3-163                         |           | 41  | Various DWR   | See "Other Stressors" in I-caps? (compare previous occur's)   | Text has been modified for consistency.  |
| 374 | 3-163                         |           | 42  | Various DWR   | Suggest using "management" instead of "managing"  | Text has been modified to address this comment.  |
| 375 | 3-163                         |           | 43  | Various DWR   | See "other stressors" no caps? (compare line 41) -- I-caps better!  | Text has been globally modified for consistency.   |
| 376 | 3-164                         |           | 12,29   | Various DWR   | Here "selective" but "Select" on previous page  | Text has been globally modified for consistency.   |
| 377 | 3-164                         |           | 13  | Various DWR   | Change "of" to "by"   | Text not modified. Style preference.   |

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| 378 | 3-164  |           | 14     | Various DWR   | Suggest "hatchery-reared" be hyphenated  | Text has been modified to address this comment.  |
| 379 | 3-164  |           | 23     | Various DWR   | 4 words in parentheses are redundant, AWK, confusing   | Text has been modified for clarity.  |
| 380 | 3-164+ |           | (gen)  | Various DWR   | Need a paragraph to explain "Mark-Select[ive] Fishery" CONCEPT somewhere in this section -- remember the audience of this document is the Public!  | Text has been modified to address this comment.  |
| 381 | 3-165  | 3.4.3     |        | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: To the extent stock recruitment and possible Allee effects have been identified as potential stressors and limitations on population recovery of the delta smelt and longfin smelt, possible measures to supply wild populations could greatly assist with recover of the species. Species advocates will no doubt raise concerns related to the natural and regulatory baseline that, left unaddressed, could represent potential obstacles to implementation of this measure. Efforts should be made, therefore, to address such concerns, to the extent possible, to enable realization of the potential conservation benefits of such an action, while at the same time avoiding or minimizing any potential adverse impacts.</i>  | Text not modified. Issues raised by the comment will need to be addressed by the Steering Committee. |
| 382 | 3-167  | 3.4.3     | 5      | Greg Gartrell<br>Contra Costa Water District            | Is this paragraph about oxygen diffusers in the right place?   | Text has been modified to remove the misplaced text.   |
| 383 | 3-167  | 3.4.3     | 28-34  | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: In order to better gauge whether the proposed study of "at least 27 diversions" will yield useful or "comprehensive" information about the potential effects of non-project diversions in the Delta, it would be necessary to know more specifics about how this study will be designed. In pursuing any such project, at a minimum, Farm Bureau would strongly urge the BDCP to ensure adequate and meaningful on-going communication with affected diverters, local reclamation districts, and representatives of any corresponding Delta water districts (including, primarily, the North, Central, and South Delta Water Agencies). In addition, we would encourage the BDCP to liaison closely with the Family Farm Alliance and with any persons involved in and knowledgeable about past implementation of both the USBR's Anadromous Fish Screen Program and the CDFG's Fish Screen and Passage Program. The collective knowledge, experience, and</i> | Text not modified. Perspective provided is appreciated.  |

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|     |                               |           |  |  | <i>perspectives of these various sources would no doubt redound to the benefit of the proposed measure and greatly increase its chances of success.</i>   |   |
| 384 | 3-168<br>throu<br>gh<br>3-169 | 3.4.3     | 3-<br>168:<br>31<br>Throu<br>gh<br>3-<br>169:<br>1 | Justin<br>Fredrickson<br>California Farm<br>Bureau<br>Federation | <p>“A coarse estimate of 22,000 cfs has been calculated as the total <u>combined</u> capacity of these diversions, <u>throughout the Delta and in areas immediately upstream, although only a portion of all 2,200 of diversions, from roughly [ ] to [ ] percent at the height of the irrigation season to [ ] to [ ] percent during the remainder of the year would be actually expected to operate simultaneously, at any given point in time.</u> The majority of these diversions divert water to agricultural fields between 1 April-August, depending on the crop. This diversion timing partially overlaps with the 2 presence of many covered species in the Delta (generally January-July). <u>Although, as shown in Figure 3.9, the overall distribution of such 2,200 diversions throughout planning area is relatively uniform, they also vary considerably in size and purpose and are quite spatially and temporally diffuse across a wide range of habitat types and hydrodynamic conditions.</u> Over 95% of 3 these water diversions are not screened to reduce fish entrainment (Herren and Kawasaki 4 2001). <del>Given this information,</del> <u>On a macro scale, therefore, the cumulative</u> potential for significant entrainment of fish is high 5 (Hallock and Van Woert 1959 as cited Moyle and White 2002). Limited studies indicate 6 that screens over such diversions have been at least 99% effective in reducing fish 7 entrainment into them, even for larval fish &lt;25 mm (Nobriga et al. 2004). 8</p> <p><i>Comment: Among other things, the text apparently refers to the <u>total combined</u> capacity of all 2,200 diversions in and immediately upstream of the Delta. Since these 2,200 diversions are generally very small, and because they are spread throughout the Delta and in areas immediately upstream, and because there is, in reality, no time when all 2,200, or even any significant fraction of all 2,200, would ever be operated all at once, this number is quite misleading and, stated in this way, necessarily gives a very distorted impression of the cumulative impact of all of these small diversions at any given point in time. The text should be altered to address these point. Some potential language has been</i></p> | The text has been modified to clarify the problem statement and address this comment. |

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|     |        |           |        |   | <i>provided.</i>  |  |
| 385 | 3-171  | 3.4.3     | 15-16  | Justin Fredrickson<br>California Farm Bureau Federation | “Conducting localized predator control at hot spots <del>using</del> <u>using</u> a 15 variety of control methods....”  | Text has been modified to address this comment.  |
| 386 | 3-171  | 3.4.3     | 44     | Justin Fredrickson<br>California Farm Bureau Federation | “For each barriers, the estimated total cost would be....”  | Text has been modified to address this comment.  |
| 387 |        | 3.5       |        | Cindy Kao<br>SCVWD                                      | I’ve looked over Chapter 3, Sec 3.5 in some detail and have some questions/comments. The text in Section 3.5.3 indicates that “the BDCP Implementing Entity will prepare detailed monitoring plans tailored to specific conservation measures”. It is not explicitly stated that separate monitoring plans will also be developed to monitor biological objectives, although there are implications to that effect (e.g., first bullet in 3.5.3 and Table 3.12). I looked carefully at the biological goals and objectives, and it looks like data needed to evaluate whether we are reaching those goals can be obtained from overall systems monitoring, compliance monitoring, and effectiveness monitoring for the conservation measures. In other words, it doesn’t seem like separate monitoring programs need to be developed to monitor attainment of biological goals and objectives. It’s not clear if the document recognizes this but is just unclear (in which case the language in the document should be clarified), or if it is indeed trying to say that a separate suite of monitoring efforts needs to be established for biological G&Os (in which case we should talk more about this because it doesn’t seem like a good approach). | Text has been clarified to address this comment. |
| 388 |        | 3.5       |        | Cindy Kao<br>SCVWD                                      | Monitoring programs for individual conservation measures and systems monitoring as well as BG&O, if planned, would likely overlap. Is the actual intent to put together a streamlined monitoring program, utilizing and perhaps refining existing monitoring programs, that minimizes redundancy? Data can be drawn from this program to perform specific analysis - e.g., to evaluate effectiveness of individual measures, system   | Text has been clarified to address this comment. |

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|     |        |           |   |   | status as a whole, or progress towards reaching biological goals and objectives. The way Section 3.5 is currently put together implies a lot of overlapping, redundant monitoring programs and details. It would help to add some clarifying text if this is not the intent.   |   |
| 389 | 3-176  | 3.5       | 37  | Various DWR   | This is the truth of the program - may provide funding for research. As with other restoration project, monitoring and research support will be conditional and poorly funded.   | Text has not been modified. Monitoring and research is a major and integral component of BDCP implementation.   |
| 390 | 3-177  | 3.5.2     | 3-177:<br>28<br>Throu<br>gh<br>3-181:<br>13 | Justin Fredrickson<br>California Farm Bureau Federation | <i>Comment: Regarding effectiveness monitoring with respect to Other Stressors measures in general (and habitat measures to a lesser extent), just as we cannot currently, accurately gauge the magnitude, severity and relative contribution of various stressors and environmental factors, it is perhaps even less likely that we will be able to accurately gauge measurable benefits of many of the other stressors conservation measures in any strictly quantitative sense. Monitoring must, therefore, have macro- and system-level components, in addition to site-specific monitoring, consistent with the underlying premise of the BDCP that "the whole is greater than the sum of the parts."</i> | Text has been modified to address this comment.   |
| 391 | 3-177  | 3.5       | 36  | Various DWR   | For many species it will take multiple surveys over multiple years to determine if a covered species are present.  | Text not modified. Preconstruction surveys will be implemented to identify the need to implement avoidance and minimization measures at the time actions are implemented. |
| 392 | 3-178  | 3.5.2     | 5   | Various DWR   | "specific sensitive occurrences covered species" should be "of covered species"  | Text has been modified for clarity.   |
| 393 | 3-178  | 3.5.2     | 10-11                                       | Various DWR   | "accordance with specifications and plans." Should be "accordance with specifications, plans, and permits"   | Text not modified. Permit requirements would be subsumed within plans and specifications.   |
| 394 | 3-178  | 3.5.2     | 12  | Various DWR   | Construction compliance with permits may need to be separated from conservation measure compliance, potentially using a different term.  | Text not modified. This section addresses compliance with permits   |

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|     |        |           |   |   |   | conditions independent of the type of BDCP action.  |
| 395 | 3-178  | 3.5.2     | 1                                       | Various DWR   | Construction monitoring should also include monitoring for any covered mitigation/minimization/conservation measures that are set forth in permits such as 1600, 401, 404; as well as ESA and CESA requirements set forth by agencies as permitting conditions.   | Text not modified. Preconstruction surveys will encompass all preconstruction survey requirements.  |
| 396 | 3-179  | 3.5.2     | 3-179:<br>34<br>through<br>3-179:<br>42 | Justin Fredrickson<br>California Farm Bureau Federation | (Re: "System monitoring is conducted to assess the overall status, trends, and distribution of selected 34 covered species populations; the responses of aquatic ecosystem processes that support covered 35 fish species; and the status of covered natural communities, including the ecological functions they 36 provide covered species over the term of the BDCP....")<br><br><i>Comment: Such large-scale trends should be an express component of regulatory assurances along with effectiveness monitoring of individual conservation measures, to the extent individual effects and benefits may be difficult to tease apart, but system-level trends and improvements, without specific attribution, may be nonetheless apparent and identifiable.</i> | Text not modified.  |
| 397 | 3-179  | 3.5.2     | 19                                      | Various DWR   | Are fish the only aquatic species were monitoring?  | Text not modified. Text indicates covered species will be monitored as well as specific aquatic conditions supporting the covered fish species. |
| 398 | 3-180  | 3.5.2     | 15                                      | Various DWR   | "System monitoring will be conducted annually" sounds like once a year sampling. Inadvisable. Delete "annually," or add "throughout" ... periods associated with the life stages of covered species."   | Text not modified. Text indicates system monitoring would <i>initially</i> be implemented annually.   |
| 399 | 3-180  | 3.5       | 21,26                                   | Various DWR   | If the monitoring interval is greater than once a year many fish species could be put at risk before we could recognize it or respond.  | Text is not modified. Text indicates maximum interval for monitoring. Monitoring can be more frequent if needed.                                |

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| 400 | 3-180  | 3.5.2     | 26     | Various DWR | Suggest for long-term monitoring of natural communities, we look at 5-year intervals.  | Text not modified. The monitoring interval will be developed through the ongoing BDCP planning process.   |
| 401 | 3-181  | 3.5.3     | 32/36  | Various DWR | Aren't these saying the same thing? You list analytical methods, but it seems to me, these two lines could be combined as they overlap each other. I suggest that when the protocols are written, don't be specific about which analytical methods will be used. You don't want to limit yourself this way.  | Text modified to combine the bullets. Process for development of monitoring protocols will include protocols for future modifications.  |
| 402 | 3-182  | 3.5.3     | 7      | Various DWR | This is a run-on sentence.   | Text has been modified for clarity.   |
| 403 | 3-182  | 3.5.4     | 17     | Various DWR | Again, you list only fish species.   | Text has been modified to include reference to other monitoring programs for covered wildlife and plants.   |
| 404 | 3-184  | 3.5.6     | 10/11  | Various DWR | Poor punctuation “, and will adopt...” is not a complete sentence. Therefore, there should be no comma before this end of the sentence.  | Text has been modified for clarity.   |
| 405 | 3-187  | 3.5.10    | 10     | Various DWR | Should this read “effects <i>of</i> monitoring activities”?  | Text not modified. Effects monitoring is a type of monitoring.  |
| 406 | 3-188  | 3.6       | 1      | Various DWR | It does not show that there is a full understanding of the complexities and challenges of a restoration of this magnitude if Adaptive Management Program is delegated to Section 3.6. This should be moved to be before section 3.4. In the San Joaquin River Restoration Program (a program far less complicated) adaptive management is recognized as the core of the program and takes center stage by being placed near the front of the document. The right mind set is essential for the program to be approach correctly. Adaptive Management needs to start before the first shovel is sunk not after all the near term conservation measures have been implemented. | Text not modified. Chapter sections are not presented in any order of their importance. As explained throughout Chapter 3 and in Section 3.6 in particular, adaptive implementation of the BDCP based on application of new information is a fundamental element of the Plan. |
| 407 | 3-188  | 3.6       | 11     | Various     | Incomplete/Nonsensical sentence  | Text has been modified for  |

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|     |               |                  |               | DWR              |  | clarity.   |
| 408 | 3-189         | 3.6.1            | 11, 21        | Various DWR      | Poor punctuation with use of comma then and.   | Text will be revised to reflect comment.   |
| 409 | 3-194         | 3.6              | Fig.          | Various DWR      | Should the routing tree also send information from Routine Changes and Non-Routine Changes to boxes 13 and 14? | Text not modified. Adaptive changes route back to Box 1 then back thru the process, including boxes 13 and 14. |

DRAFT