



# CVCWA

## Central Valley Clean Water Association

*Representing Over Fifty Wastewater Agencies*

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July 29, 2014

*Via Electronic Mail*

BDCP Comments

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**SUBJECT: Comments on Bay Delta Conservation Plan (BDCP) and Environmental Impact Report/Environmental Impact Statement (hereinafter collectively referred to as “EIR/EIS”)**

Dear Sirs:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to provide comments on the BDCP and EIR/EIS.

CVCWA is a nonprofit association of Publicly Owned Treatment Works (POTWs) throughout the Central Valley whose primary mission is to represent wastewater agencies in regulatory matters while balancing environmental and economic interests. CVCWA members have a deep commitment to the protection of beneficial uses in the waters of the Central Valley, and have a special interest in the recovery of the Delta ecosystem. Many of CVCWA’s members will be directly impacted by the BDCP and have a significant interest in its development and implementation.

## **Context for CVCWA Comments**

CVCWA members are impacted by an impaired Delta ecosystem. Regulatory pressures are intense because of the Pelagic Organism Decline (POD) and other ecosystem problems. CVCWA therefore has an interest in ensuring that the BDCP will remedy past impacts associated with the operations of the Central Valley Project (CVP) and State Water Project (SWP) that have contributed to a degraded Delta ecosystem. Further, CVCWA has an interest in ensuring that the proposed BDCP project will not, under any circumstances, make conditions in the Delta worse. CVCWA's comments on the EIR/EIS are intended to address this interest.

It is acknowledged in the EIR/EIS (Section 31, p. 31-5) that current water project operations have caused "long standing adverse environmental consequences associated with...diversions from the South Delta, such as...fish losses from entrainment."

Facts that are commonly recognized are:

- Reduced exports from the South Delta result in reduced entrainment and reduced losses of fish during low flow conditions.
- Reduced use of the South Delta facilities during certain critical periods will improve fish survival.
- Migrating salmon have less chance of survival if diverted into the Central Delta, where predation pressure and entrainment are greatest.

It is also understood within the Delta scientific community that current water project operations have increased hydraulic residence times in the Delta, altered salinity regimes, changed the annual hydrograph, and caused indirect loss of productivity. These changes have led to various impacts, including the proliferation of invasive species, changes in the Delta food web, and increased predation of covered fish species.

CVCWA is concerned that the EIR/EIS does not directly address these impacts of past water project operations on covered fish species and the Delta ecosystem. Such information represents the foundation for assessment of future impacts of changed water project operations under the proposed project. CVCWA is concerned that the failure to establish this foundation limits the ability to project the future impacts of the proposed project. Additionally, the EIR/EIS does not clearly identify or distinguish the differences in export volumes that are currently occurring, versus the export volumes that will be accommodated by the proposed project. Since the impact of current exports is clearly tied to impacts on covered fish species, lack of clarity in the EIR/EIS on this point creates a lack of confidence in the overall impact assessment.

The BDCP is supposed to improve the Delta ecosystem, consistent with the co-equal goals of the Delta Plan. The BDCP intends to improve the Delta ecosystem through reduced entrainment in the South Delta and improved ecosystem health through wetlands creation. A high degree of uncertainty exists regarding the ability of the proposed project to deliver on this intent.

The burden of proof is on the BDCP to clearly identify the positive and negative impacts it will have on the Delta ecosystem and to ensure that the advertised benefits are realized. This burden is intensified since the BDCP would propose to operate under a 50-year take permit.

Finally, CVCWA is very concerned that the proposed BDCP invests inordinate authority to the agencies seeking the 50-year take permit in the implementation of adaptive management, a cornerstone of the BDCP proposal. On the one hand, the proposed BDCP recognizes the great uncertainties regarding the impact of the project on the Delta ecosystem and the actual benefits that may be realized by future, uncertain restoration projects. Yet, on the other hand, the BDCP is definitive in restricting the imposition of future constraints on the permittees and grants those parties significant leverage in resisting such future requirements, which may be essential to protecting the health of the Delta ecosystem.

## Major Comments

CVCWA is concerned regarding numerous inadequacies of the BDCP and EIR/EIS, as follows:

- 1. A dramatically impaired fishery and ecosystem in the Delta seriously impacts Central Valley POTWs** – BDCP documents fail to adequately address the impacts of water project operations on the Delta fishery, including past and future impact of entrainment and the loss of hundreds of millions of larval, juvenile and adult fish over the next 50 years as a result of the proposed project and associated take permit. Most problematic, the BDCP and its documents fail to ensure that the Delta fishery will be restored or even that it will not continue to be in crisis or worsen under the proposed project. The BDCP and its documents are fundamentally flawed in their failure to provide an adequate assessment of the current project operations on the Delta ecosystem.
- 2. Adaptive Management Deficiencies** – The BDCP fundamentally relies on “adaptive management” to address many uncertainties associated with the proposed project. However, the BDCP governance structure restricts, rather than promotes, effective adaptive management. The BDCP fails to establish the science foundation/baseline or proper future monitoring requirements to allow for

- adaptive management to properly function or for the future impacts of the BDCP project operations to be determined (and managed). BDCP monitoring and research commitments by the project proponents are largely absent, and, where present, are weak. Monitoring and research, performed by neutral science experts, should itself be a BDCP conservation measure, not a loose end.
- 3. BDCP is one sided and inequitable** – The BDCP guarantees certainty to the construction of Sacramento intakes and conveyance and ensures 50-year certainty regarding water operations, but it restricts the ability to adaptively regulate project operations, and fails to ensure Delta restoration, including the wetlands areas so vital to the achievement of the “dual goals,” as articulated in the 2009 Delta Reform Act.
  - 4. Serious problems with the BDCP governance structure** – The proposed structure provides undue power to the State Water Contractors and does not allow effective input from many Delta and Central Valley stakeholders, or a fair process for regulating the water contract operations for the next 50 years.
  - 5. Unbalanced assessment of BDCP impacts on nutrient levels and nutrient-related effects** – The BDCP and EIR/EIS fail to address the effects of the proposed BDCP project in comparison to nutrient impacts from other sources, i.e. the BDCP documents allege that nutrients from BDCP restoration wetlands are beneficial, whereas nutrients from municipal and other sources are detrimental. The EIR/EIS fails to provide a mass balance of nutrients in the Delta that would allow for the fair assessment of various sources.
  - 6. Inadequate assessment of the BDCP on residence times and temperature in the Delta** - The EIR/EIS fails to adequately consider the effects of residence time and temperature changes associated with the proposed project and related effects in encouraging invasive macrophytes, *Microcystis*, and other harmful aquatic species.
  - 7. Fails to adequately address the impact of the BDCP on the Delta food web, including significant loss of productivity with the exports** – The BDCP documents provide inadequate consideration of invasive clam effects on the Delta food web and the proposed future wetlands restoration projects.

- 8. Inadequate analysis of compliance with federal antidegradation policy** – The EIR/EIS contains grossly inaccurate findings of consistency with the federal antidegradation policy with regard to Clean Water Act (CWA), section 303(d) (hereafter referred to as “303(d)”) listed parameters such as EC and mercury in the Delta. The significant degradation of EC and mercury in the Delta associated with the proposed project are *not allowed* under the federal antidegradation policy provisions of the CWA. The EIR/EIS fails to describe mitigation measures that would avoid these unallowable changes in mercury and EC levels in the Delta.
  
- 9. Fails to adequately evaluate future Delta flow scenarios/alternatives as mandated by the Delta Reform Act** – The BDCP documents largely ignore the Delta flow criteria that have been identified as necessary to support a healthy ecosystem by State Water Resources Control Board (State Water Board) in its August 2010 report. These inadequacies in the BDCP documents represent a fundamental flaw that, unless corrected, should prevent the adoption of the BDCP as an element of the Delta Plan.
  
- 10. Inadequate and unbalanced assessment of potential positive and negative impacts of restoration wetlands on mercury, nutrients, pathogens and other water quality parameters** – The proposed restoration wetlands are promoted in the BDCP as largely beneficial actions. The EIR/EIS fails to adequately address the potential adverse effects and required mitigation associated with those effects.

CVCWA has additional detailed comments, which are included as Attachment A.

We appreciate your consideration of these comments. If you have any questions or if CVCWA can be of further assistance, please contact me at (530) 268-1338 or [eoofficer@cvcwa.org](mailto:eoofficer@cvcwa.org).

Sincerely,



Debbie Webster,  
Executive Officer

## Attachment A

### **CVCWA's Detailed Comments**

#### **Bay Delta Conservation Plan and EIR/EIS**

##### **I. Comments Regarding Compliance With Delta Reform Act**

The Delta Reform Act in California Water Code section 85320(b), states that the BDCP will not be incorporated into the Delta Plan if it does not meet the Delta Reform Act's requirements. The EIR/EIS fails to adequately address specific requirements of the Delta Reform Act in the following major areas:

- The EIR/EIS is to provide a comprehensive analysis of a reasonable range of flow criteria, rates of diversion, and other operational criteria. This range is to include flows necessary for recovering the Delta and restoring fisheries under a reasonable range of hydrologic conditions. This range is to include the flow criteria developed by the State Water Board in August 2010, which identified flow conditions and operational requirements to provide fishery protection under the existing Delta configuration.
- Using the above information, the EIR/EIS is to identify the remaining water available for export and other beneficial uses.
- The Delta Reform Act requires that construction of a new Delta conveyance facility shall not be initiated until arrangements have been made to pay for the cost of mitigation required for construction, operation, and maintenance of any new Delta conveyance facility. Accordingly, the mitigation measures need to be clearly specified and linkages to impacts of the proposed project should be plainly identified so that the financial obligations are apparent.

The EIR/EIS either fails to include or fails to clearly address these major requirements of the Delta Reform Act. Therefore, the BDCP cannot be incorporated into the Delta Plan unless these flaws are remedied.

Additionally, the Delta Plan requires that actions be taken to reduce reliance on the Delta as a water supply. The California Environmental Quality Act (CEQA) requires that the EIR/EIS give proper consideration to measures that would reduce reliance on the Delta, including improved water use efficiency, increased storage, and local/regional water supply projects (e.g. desalination). These measures should be addressed either as an alternative to the proposed plan or as proposed mitigation measures to address significant impacts of the proposed project. The EIR/EIS fails to consider or properly address these measures as alternatives to the proposed project.

## **II. Section 3, Define Existing Conditions**

### **A. Appendix 3D, Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions**

- Appendix 3D.2.1 (Existing Conditions), 3D.2.2 (No Action Alternative) and 3D.2.3 (No Project Alternative)

The selection of two different baselines for the CEQA and the National Environmental Polict Act (NEPA) elements of the BDCP analysis of project impacts is confusing and unnecessary. It makes it virtually impossible for the public to understand the impact analysis or to discern the incremental impacts of the proposed project. Additionally, the decision to choose future conditions (projected to the year 2060) in one of the baselines introduces such variability and uncertainty into the baseline as to render the impact analysis effectively impossible for the average citizen to interpret or understand.

CEQA guidelines encourage the use of “existing conditions” as a baseline for the impact analysis. In fact, under CEQA, the use of a future baseline is only permissible under specific conditions, i.e. where use of an existing conditions analysis would be misleading or without informational value (as stated on page 3D-2 in Appendix 3D of the subject document). As a result, the BDCP impact analysis under CEQA is purportedly based on existing conditions. However, since numerous assumptions about the impacts of a multitude of other ongoing programs were made, the “existing conditions” baseline is not distinct and is not a helpful basis for the assessment of incremental changes.

Under NEPA guidelines, there is no requirement to use a baseline other than the existing conditions. Despite this fact, a decision was made by the preparers of the BDCP analysis to select a baseline for impact analysis based on the “No Action” alternative, which includes projected future conditions in the year 2060. No information is presented to defend or rationalize this decision. Instead, text is provided to state that “nothing in NEPA or NEPA case law precludes NEPA lead agencies...from including anticipated future conditions in the impact assessment.”

Given the choice of greatest clarity and simplicity (in terms of providing an EIR/EIS impact analysis that can be more readily understood), the choice was made to go in the opposite direction – i.e. to choose to use different baselines for CEQA and NEPA, which reflect different time frames with different sets of assumptions used to define baseline conditions. This choice creates a tremendous lack of clarity and greatly impedes the public’s ability to understand the impact of the proposed project.

- Appendix 3D.3, Descriptions for the EIR/EIS

In all the assumptions listed to “describe” the baseline conditions (e.g. in Table 3D-2 and 3D-4), at least one major ongoing effort was noticeably absent – that effort is the 2010

action by the State Water Board to adopt Delta flow objectives and to potentially restrict Delta exports through the proposed BDCP project. These tables in the EIR/EIS fail to mention the August 2010 Delta flows report that was issued by the State Water Board in specific response to a mandate under the Delta Reform Act of 2009. The EIR/EIS also fails to mention the multiple workshops that have been held by the State Water Board to develop scientific information that will be used in the final adoption of Delta flow requirements or the schedule for adoption of Delta flow standards by the State Water Board.

In a July 2013 letter by Delta Stewardship Council staff and consultants, the requirements in the Delta Reform Act of 2009 to address Delta flow requirements in the EIR/EIS were re-emphasized, having been previously raised in letters submitted in April 2012 and June 2010. The July 2013 letter states that the Delta Reform Act requires that the EIR/EIS include a comprehensive analysis of a reasonable range of flow criteria, rates of diversion, and other operational criteria to meet the requirements for approval of an Natural Communities Conservation Plan (NCCP). The 2013 letter also reiterated that the EIR/EIS must take into account the State Water Board August 2010 "*Development of Flow Criteria for the Sacramento/San Joaquin Delta Ecosystem.*" The Delta Reform Act intended that the results of that 2010 State Water Board study would be used to inform planning decisions for the BDCP. The 2013 letter further asked that the State Water Board's 2010 flow criteria be addressed directly in the EIR/EIS.

Review of the EIR/EIS indicates that the State Water Board 2010 Delta flow criteria were briefly mentioned in Chapter 3 and that one alternative (Alternative 8) considered a "version" of the recommendations that the State Water Board made in its report. It is not clear that the evaluation of Alternative 8 was adequate to meet the requirements of the Delta Reform Act. The EIR/EIS should describe how it provides the comprehensive analysis required under that act.

### **III. Chapter 8, Water Quality Impacts**

- Chapter 8, Section 8.1.6

The use of two different baselines (the CEQA and NEPA baselines) and the evaluation of water quality impacts in 2060 yields information that is extremely difficult to understand or verify. A simple analysis of near term water quality changes from existing ambient water quality is needed to provide the public with understandable information and to provide context/grounding for the long term impacts that are presented and to allow a proper assessment of compliance with state and federal antidegradation policies.

- Inadequate Consideration of Federal Antidegradation Policy

In various places in the EIR/EIS (e.g. in Chapter 8 and in Table 31-1), it is stated that significant unavoidable increases in concentrations of salt as measured by electrical



conductivity (EC) and/or total dissolved solids (TDS) and methylmercury will occur in the Delta as a result of the implementation of the proposed project (Alternative 4) as embodied in control measure (CM) 1, the Water Facilities and Operations control measure evaluated in the BDCP Effects Analysis.

The EIR/EIS predicts significant increases in current ambient concentrations of EC and methylmercury at various Delta locations. Under federal CWA authority, the Delta is currently listed as impaired for EC and methylmercury, a federal listing which means that water quality objectives are not attained and beneficial uses are impaired. (Such authority is found in 303(d).) The projected increased concentrations associated with CM 1 represent significant degradation in water quality, which would exacerbate impairment of already impaired beneficial uses in the Delta.

Under the federal antidegradation policy, “major federal actions” that affect water quality (pursuant to NEPA and the Endangered Species Act) trigger the application of the federal antidegradation policy and requirements. Those requirements **prohibit actions that would lower water quality in areas where existing water quality objectives are not attained** (e.g. in so-called “Tier I” waters). (See USEPA, Region 9, 1987, Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12, June 3.)

The EIR/EIS has failed to adequately articulate or address the federal antidegradation requirements, which place significant constraints on the proposed project and associated mitigation. The “key questions” to be addressed by the surface water quality impact assessment (Chapter 8, Section 8.4.1, page 8-127, lines 37-40 and page 8-128 lines 1-4) do not adequately address the requirements of the federal antidegradation policy. The “key questions” add a threshold consideration (“to cause or substantially contribute to significant adverse effects on the beneficial uses of water in these areas of the affected environment”) which does not exist in the federal antidegradation policy or address the constraints imposed under that policy. As such, the evaluation contained in the EIR/EIS fails to properly address the fact that significant degradation of water quality in 303(d) listed waters is prohibited under the federal policy. The acknowledged degradation of EC, which will occur in 303(d) listed areas such as Suisun Bay and portions of the Delta, is not allowed under the federal policy. The proposed EC mitigation measures (WQ-11, WQ-11a and WQ-11b) that are described in the EIR/EIS are inadequate in that they will not ensure that the EC levels will be maintained in 303(d) listed waters.

Similar arguments apply to the “significant and unavoidable” degradation of methylmercury levels that is predicted to occur in the 303(d) listed Delta as a result of implementation of “habitat restoration projects” associated with the proposed project. The Delta is 303(d) listed for mercury – actions which cause significant degradation of mercury levels in the Delta are prohibited. The proposed control measure for mercury, CM 12, does not adequately assure that water quality associated with mercury will be maintained or that unallowable degradation of mercury levels in the Delta will be prevented.

- Failure to Fulfill requirements of the Delta Reform Act

The Delta Reform Act requires that the EIR/EIS provide special attention to water quality impacts. A number of water quality impacts identified in the EIR/EIS are deemed to be significant and unavoidable. Such impacts include increased levels of EC, chloride, methylmercury, and increased violations of water quality objectives. The EIR/EIS does not provide or describe specific and effective mitigation to avoid or reduce such impacts.

Many of the proposed water quality mitigation measures contained in the EIR/EIS are non-specific, are not clearly enforceable and are deferred to the future. For instance, the Draft EIR/EIS fails to identify the number of acres of farmland in the Delta that would be impacted by the degradation of water quality (e.g. EC) resulting from the project. The absence of such information prevents the development of adequate mitigation.

Instead, the EIR/EIS relies on vague statements and non-commitments. For example, the proposed mitigation measure for salinity (WQ-11) states “proposed mitigation requires a series of phased actions to identify and evaluate existing and possible feasible actions, followed by development and implementation of the actions, if determined to be necessary.”

This can hardly be described as a clear commitment to mitigate the significant impacts that the proposed project will create on Central and West Delta salinity. The failure to propose definitive mitigation measures that would directly offset the projected impacts is a significant flaw in the EIR/EIS, and contradicts the mandate under the Delta Reform Act and federal antidegradation policy.

- Chapter 8, Section 8.3.2.13, Central Valley Drinking Water Policy

The paragraph describing the Central Valley Drinking Water Policy should be deleted or drastically modified to reflect the contents of the recently adopted Water Quality Control Plan for the Sacramento-San Joaquin River Basins (July 2013) (Basin Plan) amendment into the Basin Plan. (See Section 8.3.2.13, p. 8-123.) The existing paragraph is outdated and places undue emphasis on organic carbon and disinfection by-products, which were found to be adequately addressed by existing Basin Plan language. The adopted policy includes new narrative water quality objectives and an implementation plan for *Cryptosporidium* and *Giardia*.

## **BDCP**

### **I. Chapter 5, Effects Analysis**

- Overarching Comments
  1. The chapter is difficult to review and comprehend because it is poorly organized, inconsistent, and suffers from inadequate cross-referencing. The chapter makes the interpretation of net effects of BDCP implementation difficult, at best. The Independent Panel charged with review of the Effects Analysis has stated that it “universally believes that by itself, Chapter 5... inadequately conveys the fully integrated assessment that is needed to draw conclusions about the Plan...” (Delta Science Program Independent Review Panel Report (DSP-IRP Report), BDCP Effects Analysis Review, Phase 3, March, 2014, p. 5.)
  2. Chapter 5, and most importantly the conclusions stated in Chapter 5, do not appropriately reflect the high uncertainty regarding the project effects that were described in the technical appendices supporting the chapter. In particular, the Chapter 5 summary did not recognize the critical uncertainties associated with the presumed beneficial effects of tidal wetland restoration. Rather, conclusions were reached that tend to overstate the positive effects of the project. Competing hypotheses are not offered or considered.
  3. The objectivity of the analysis captured in Chapter 5 needs to be improved. The chapter does not contain an integrated assessment of net effects of the proposed project. The DSP-IRP has called for the net effect assessment approach to be revamped. While considerable effort has been made to document the complex information that needs to be considered in determining net effects, a coherent synthesis of that information using a systematic approach was not presented. Rather, “professional judgment” was relied upon, which often resulted in a one-sided opinion regarding the net positive effect of the project. As a result, the chapter conveys an unsatisfying message of “trust us.” The assumed effects developed through “professional judgment” are more accurately portrayed as working hypotheses of the relationship between actions, stressors, and biological outcomes.
  4. The chapter asserts the beneficial effects of the BDCP conservation measures in the face of extensive uncertainty, which is acknowledged in the chapter and its associated appendices. The net effects analysis tends to overstate conclusions of positive benefits for covered fish species. In large part, given that the alleged benefit of the BDCP is weakly supported in many respects, the BDCP acknowledges that it must rely on effective adaptive management to ensure that the predicted benefits will occur. However, the proposed adaptive management framework and governance structure is inadequate, non-rigorous, inadequately

- transparent and inclusive, and lacking true commitment. The adequacy of the BDCP therefore rests on the uncertain application of adaptive management to ensure that alleged benefits are attained through a progressively refined plan. The DSP-IRP has strongly recommended that a commitment be made under BDCP to create and implement a much-improved, exceedingly rigorous adaptive management approach that includes adequate monitoring and independent science review. (DSP-IRP Report, p. 9.) The Panel also recommends the identification and inclusion of numeric triggers as part of the adaptive management structure.
5. Only one configuration of Restoration Opportunity Areas (ROAs) were modeled using hydrodynamic models. The locations of the modeled ROAs are not available. Given the potential impact of such areas on hydrodynamics, tidal volumes, and hydraulic residence times in the Delta, the actual BDCP project may have a much different effect on hydrodynamics, fish populations, and water quality than has been described in the BDCP Effects Analysis. As a result, it is not possible to evaluate the sensitivity of these factors and outcomes over a range of different placements of ROAs. This must be remedied in the BDCP Effects Analysis and the EIR/EIS.
  6. According to the DSP-IRP, the effects of the BDCP water operations may be to expand the populations of invasive clams in the Delta. In addition, *Microcystis* blooms are projected to be unchanged or slightly worse under the BDCP. Water operations that reduce flow, increase water residence time and increase temperatures may promote *Microcystis*. (DSP-IRP Report, pp. 17, 34, 70.) The BDCP Effects Analysis and EIR/EIS must be modified to reflect these findings.
  7. The effect of clams on the aquatic food web is not incorporated into the food web analyses presented in Chapter 5. This is a significant deficiency, based on the current scientific information, which indicates that the 1987 clam invasion had a significant impact on the Delta food web. (DSP-IRP Report, pp. 34, 37, 59, and 70.) The BDCP Effects Analysis must be modified to address this finding.
  8. Restoration actions are likely to increase the production, mobilization and bioavailability of methylmercury. (Appendix 5d-24, lines 41-44; DSP-IRP Report, p. 67.) The EIR/EIS must provide commitments to implement mitigation measures that avoid such detrimental effects.
  9. Wetlands restoration could result in increases in ammonia via sediment re-mineralization or clam excretion. Wetlands could also be a sink for ammonia in creating enhanced opportunity for nitrification and denitrification. (See DSP-IRP Report, p. 67.) The BDCP Effects Analysis must be modified to address this finding.

10. The BDCP Effects Analysis includes an assumption of no entrainment of covered fish at the proposed North Delta Diversion (NDD) facilities. Alternative assumptions should be evaluated. Additionally, the assumption that no predation will occur at the NDD facilities does not agree with the observed conditions at other similar facilities, including the Glenn-Colusa fish screens. The impacts of predation at each intake structure must be evaluated in the BDCP Effects Analysis and the EIR/EIS. (See DSP-IRP Report, p. 37.)

- 5.1.1 Basis for Evaluation

The first paragraph states that the effects analysis, which is a fundamental, required element of the BDCP, is based on an extensive body of monitoring data, scientific investigation, and analysis of information on the Delta compiled over several decades. (BDCP, Chapter 5, p. 5.1-1.) Long term monitoring and research programs conducted by the Interagency Ecological Program, state and federal resource agencies, and academic investigators with the specific intent of assessing the effect of the water project operations has contributed to this information base. However, despite this wealth of information, a clear presentation and description of the effects of the existing water project operations on covered species is missing from the BDCP effects analysis and EIR/EIS. Such information is vital to the understanding of the historical impacts on the Delta ecosystem and the projected future impacts of the proposed BDCP project. This is a fundamental flaw in the Effects Analysis that should be corrected prior to the approval of the BDCP by state and federal fisheries agencies.

## II. Appendix 5.D, Contaminants

- Appendix 5.D.0 Executive Summary

The first sentence in the Executive Summary alleges that contaminants have been associated with the POD. (Appendix 5.D, p. 5.D-i.) In making this allegation, a number of references are cited as support for this statement. It is instructive to consider these references, one-by-one, to illustrate the absence of veracity of this allegation.

The first cited document, Baxter et al 2010, is an IEP document that lists a number of possible factors that have been identified in connection with the POD. There is no definitive information in this reference that raises the role of contaminants in the POD above that of a loose working hypothesis.

Brooks et al 2012 contains no definitive information that links contaminants to the POD. The article provides a loose collection of information that poses questions and suggestions regarding the potential role of contaminants but provides no definitive analysis and reaches no supportable conclusions.

Johnson et al 2010 directly and extensively examined the possible role of contaminants in the POD and found nothing to support such a conclusion. The report suggested the need for further monitoring and research to continue to examine this question.

Glibert 2010 is a paper that alleged a specific linkage of contaminants (in particular, ammonia) on the POD based on a CUSUM statistical analysis. That analysis and the associated conclusions reached in the paper were heavily criticized by respected members of the Delta scientific community. This paper does not establish the alleged linkage.

Glibert et al 2011 is a paper that advances the theory of ecological stoichiometry as a suggested working hypothesis for the Bay-Delta ecosystem. As acknowledged in the paper, the hypothesis is untested in the Bay-Delta system. The paper itself acknowledges the need for significant additional research to validate the theories proposed in the paper. It is clearly not a definitive work establishing a link between contaminants and the POD.

In summary, none of the source cited in Appendix 5.D. establish a direct or indirect linkage between the POD and contaminant concentrations or other water quality conditions in the Delta. As a result, the subject language should be eliminated.

- Appendix 5.D.0

In the first paragraph, last sentence, it is implied that sublethal levels of contaminants in Delta fish have been observed to cause various effects, including impaired growth and reproduction and increased susceptibility to disease. (Appendix 5.D., p. 5.D.-i.) The citation provided to support this statement (Werner et al 2008) does not directly support this statement and does not demonstrate the existence of such conditions as a result of contaminant levels in the Delta. Instead the cited reference mentions these effects as potential issues and points to further research to assess their possible occurrence. The sentence in question must be modified to clarify this difference between “observation” and “hypothesis.”

We appreciate your consideration of these comments. If you have any questions or if CVCWA can be of further assistance, please contact me at (530) 268-1338 or [eofficer@cvcwa.org](mailto:eofficer@cvcwa.org).

Sincerely,



Debbie Webster,  
Executive Officer