

**The Bay Delta Conservation Plan:  
Points of Agreement  
for  
Continuing into the Planning Process  
(November 16, 2007)**

**1.0 Introduction**

Members of the Steering Committee for the Bay Delta Conservation Planning (BDCP) process are developing a conservation plan for the Bay Delta pursuant to the Endangered Species Act (ESA) and the Natural Community Conservation Planning Act (NCCPA).

Under a Planning Agreement dated October 6, 2006, the Steering Committee worked over the course of this year on developing an overall approach to the BDCP. We have chosen to concentrate initially on different approaches to conveyance and how they would likely contribute to achieving the planning goals and conservation objectives of the Planning Agreement and affect habitat restoration opportunities across the Delta.

This memorandum describes the agreements reached by the Steering Committee to date on the basic approaches to several important topics for the plan, including potential improvements to the water conveyance system, and strategies for in-Delta habitat restoration and enhancement. The Steering Committee has also agreed on the importance of addressing several other topics for purposes of proceeding into the planning process, including the development of adaptive management and monitoring programs, and a clear and reliable structure for plan implementation, including effective institutional arrangements for adaptive management. The Steering Committee will use these agreements as the starting points for developing the overall conservation plan for the Bay Delta.

For certain topics, such as improvements to the water conveyance system, this memorandum provides a preliminary level of detail, commensurate with the level of evaluation undertaken thus far by the Steering Committee and its technical team. Other elements are described more generally and will be further developed during the course of the planning process.

This memorandum is not intended to be a comprehensive and exhaustive enumeration of all of the elements of a scientifically-sound and legally-defensible conservation plan under the ESA or the NCCPA. The overall conservation plan will be developed during the planning process. An attachment to this memorandum outlines the range of topics which the Steering Committee will address in the BDCP.

The Steering Committee will develop the content of the BDCP during the remainder of 2007 and throughout 2008. The proposed plan will then be fully analyzed under relevant state and federal environmental laws, including the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), to ascertain if the proposed plan will achieve its conservation and water supply objectives and satisfy other applicable requirements. These analyses will include a reasonable range of alternatives and will be subject to thorough public

review and comment. Through these analyses and public review, the Steering Committee anticipates that additional ideas and approaches will emerge and be incorporated into the final BDCP. Therefore, all of the substantive decisions of the Steering Committee at this juncture about the basic approaches enumerated in this memorandum are open to change and adjustment as the planning process matures and as new information warrants.

The members of the Steering Committee intend to develop and evaluate the design, operational parameters and governance arrangements that may be necessary to achieve the plan's conservation and water supply objectives. The Steering Committee also intends to address issues of timing, implementation schedules and funding responsibilities for the different elements of the plan. The Steering Committee further expects that some of the actions described in the BDCP will be completed earlier than other actions. The Steering Committee will develop those details through the course of the planning process itself, and then analyze and refine them pursuant to the NEPA/CEQA process described above.

Members of the Steering Committee also understand that the BDCP will ultimately reflect a comprehensive set of agreements. As such, none of the members of the Steering Committee is bound to any single element of the plan until agreement has been reached on the final plan as a whole. Unless the Steering Committee agrees otherwise, this document is not intended to constitute an endorsement of any potential capital improvement projects prior to approval of the final plan. The agreements enumerated in this memorandum should therefore be understood in this broader context.

## **2.0 Description of Key Points of Agreement**

The Steering Committee agrees that it will develop a Bay Delta Conservation Plan that will include the following elements, which will be further developed, analyzed and improved upon as described in Section 1.0, *Introduction*.

### **2.1 Habitat Restoration and Enhancement**

The BDCP will contain a habitat restoration and enhancement program designed to increase the quality and quantity of habitat and otherwise help achieve the conservation objectives for covered species, enabled in part by improvements to conveyance over the near and long term. Initial habitat restoration and enhancement efforts will be directed toward areas that offer the greatest conservation opportunities, such as in Suisun Marsh and in the north and west Delta. Completion of a new Sacramento River intake and isolated conveyance facilities (described in Section 2.3 *Conveyance Facilities*) would change the hydrodynamic conditions in the Delta in a manner that would likely afford new opportunities for habitat restoration and enhancement in various other parts of the Delta.

The types of habitat restoration and enhancement actions which will be initially evaluated for inclusion in the conservation strategy include:

- Restoring intertidal habitat to establish vegetated marshes and associated sloughs to increase habitat diversity and complexity, food production and in-Delta productivity, and rearing habitat for covered species.

- Increasing hydraulic residence time and tidal exchange within the Delta sloughs and channels by changing circulation patterns to increase primary productivity and food web support and improve turbidity conditions for Delta smelt and longfin smelt.
- Increasing the amount of functional floodplain habitat to increase the quantity and quality of rearing habitat for salmonids and sturgeon and spawning habitat for Sacramento splittail, and generate food resources for pelagic species.
- Providing adequate water quality and quantity within the Delta at appropriate times to help conserve resident native fishes and improve rearing and migration habitats for salmon moving through the Delta.

As information is gathered through the planning process and as part of project implementation, the Steering Committee anticipates that additional restoration and enhancement opportunities may be identified, evaluated and implemented based upon their ability to achieve applicable conservation objectives.

## 2.2 *Other Conservation Actions*

The Steering Committee agrees to evaluate and, as appropriate, include in the BDCP other conservation actions designed to help address a number of stressors on covered species other than water conveyance facilities and operations. These stressors include:

- Exposure to contaminants
- Non-native species competition and predation
- Entrainment at non-CVP/SWP intake facilities
- Harvest
- Reduced genetic diversity and integrity
- Effects of climate change

A list of conservation actions that may potentially address these and other stressors is included in the BDCP Conservation Strategy Options Evaluation (September 17, 2007) section 8.0 *Opportunities for Conservation Elements Available under all Options*.

## 2.3 *Conveyance Facilities*

The Steering Committee agrees that the most promising approach for achieving the BDCP conservation and water supply goals involves a conveyance system with new points of diversion, the ultimate acceptability of which will turn on important design, operational and institutional arrangements that the Steering Committee will develop and evaluate through the planning process. The main new physical feature of this conveyance system includes the construction and operation of a new point (or points) of diversion in the north Delta on the Sacramento River and an isolated conveyance facility around the Delta. Modifications to existing south Delta facilities to reduce entrainment and otherwise improve the State Water Project's (SWP) and Central Valley Project's (CVP) ability to convey water through the Delta while contributing to near and long-term conservation and water supply goals will also be evaluated. This approach may provide enhanced operational flexibility and greater opportunities for habitat improvements and fishery protection. During the BDCP process, the

Steering Committee will evaluate the ability of a full range of design and operational scenarios to achieve BDCP conservation and planning objectives over the near and long term, from full reliance on the new facilities to use of the new facilities in conjunction with existing facilities.

#### *2.4 Water Operations and Management*

The Steering Committee will develop and evaluate operating criteria for water conveyance facilities to achieve applicable near and long-term conservation and water supply goals.

#### *2.5 Monitoring, Assessment and Adaptive Management*

The Steering Committee agrees that the BDCP will include comprehensive adaptive management and monitoring programs with measurable objectives to address uncertainties regarding the role and importance of various stressors and the capacity of the conservation strategy to achieve its conservation objectives. Monitoring will be used to evaluate the success of the BDCP in meeting these objectives, including the effectiveness of the conservation strategy to address the needs of the covered species. Specifically, the monitoring program will generate information: 1) to determine if the objectives are being met; 2) to assess the effectiveness of conservation actions; and 3) to provide feedback to guide adaptive management. As described in Section 2.8, the adaptive management program will include effective institutional arrangements to administer the conservation actions and other plan elements over the plan term.

#### *2.6 Scientific Input*

During the planning process and consistent with the NCCPA, the Steering Committee will continue to seek independent scientific input to further inform the development of the BDCP. The Steering Committee will use the Independent Science Advisors' November, 2007 Conservation Guidelines Report as an important source of information to guide the development, evaluation, and implementation of the BDCP.

#### *2.7 Cost and Funding*

The Steering Committee agrees that the BDCP will include an analysis of the costs associated with plan implementation, including one-time and on-going costs. This analysis will be used to determine the level of funding and other resources that will be required to implement the BDCP. The BDCP will identify potential sources of funds for implementation, reflecting the concept of proportionality identified in the Planning Agreement, and will include assurances that adequate funding will be provided to implement the plan over its term.

#### *2.8 Implementation Structure and Decision Making*

The BDCP will include a description of the steps and actions necessary to implement the plan, including an implementation approach and schedule for BDCP conservation actions. The plan will further detail a decision-making structure for the elements of the plan, that includes the establishment of an entity or entities to assume responsibility for plan implementation, and will assign specific functions and duties to such an entity or entities. The implementing entity or entities would likely be responsible for such matters as habitat restoration and enhancement and other conservation actions; the adaptive management and monitoring program; and plan funding, oversight, and reporting.

### 3.0 *Background Information*

Over the course of this past year, the Steering Committee has evaluated different conceptual approaches to the development of the BDCP. These analyses focused primarily on the different approaches to long-term water conveyance and on restoration and enhancement opportunities that would likely advance BDCP goals and objectives. The agreements reached on these and other topics are set out in this memorandum; this section summarizes the process used by the Steering Committee to arrive at these agreements.

To facilitate a focused discussion of these issues, the Steering Committee established a Conservation Strategy Workgroup in February, 2007, which met regularly through June. The Conservation Strategy Workgroup delineated the overall goals and objectives for the BDCP, identified a wide range of conservation strategy options, and synthesized the most promising elements of those options into more detailed options centered on potential changes to the existing water conveyance system in the Delta. The workgroup also considered the opportunities afforded by these options for physical habitat restoration and enhancement, and for other conservation actions that would advance the BDCP goals and objectives.

Initially, the Conservation Strategy Workgroup identified ten “conservation strategy alternatives” for further evaluation. To better assess these strategies, the workgroup organized elements of the strategies into what it termed “conservation element bundles” (bundles). The workgroup then developed, and the Steering Committee approved, seventeen criteria by which the workgroup would evaluate the relative capacity of each of the bundles to achieve BDCP goals and objectives. These seventeen criteria were aggregated into four categories:

- biological criteria,
- planning criteria,
- flexibility/sustainability/durability criteria, and
- other resources impacts criteria.

The BDCP consultant team conducted a qualitative evaluation of these conservation bundles, the results of which were presented in a May, 2007 report to the Steering Committee entitled “Draft Conservation Strategy Short-Listing Analysis Report.”

The Steering Committee then developed a short-list of four separate conservation strategy options, each of which were focused on two key components: water conveyance facilities and habitat restoration opportunities. These four options were subjected to a more in-depth analysis of their relative capacity to achieve the planning and conservation goals of the BDCP. The four options consisted of the following:

- Option 1 provided for use of existing facilities and for habitat restoration to be focused in Suisun Marsh and the north and west Delta.
- Option 2 provided for improved through-Delta conveyance and for habitat restoration to be focused in Suisun Marsh and the north, west, and south-central Delta.
- Option 3 provided for dual-conveyance, which contemplated improved through-Delta conveyance and a new diversion located on the Sacramento River that would convey water around the Delta to the south Delta CVP and SWP pumping facilities. Habitat restoration would be focused in Suisun Marsh and the north, west, and south-central Delta.

- Option 4 provided for a new diversion, located on the Sacramento River, which would convey water around the Delta to the south Delta CVP and SWP pumping facilities. Habitat restoration would be focused in Suisun Marsh and throughout the Delta.

In early September, 2007, the consultant team provided the Steering Committee a report entitled the "BDCP Conservation Strategy Options Evaluation" (Options Evaluation), which further analyzed the four options. This report set out a largely qualitative assessment of the opportunities and constraints of each option relative to achieving the planning goals and conservation objectives. The report evaluated each of the four options using the same seventeen criteria which it had earlier identified. The report analyzed the ability of each of the four options to affect each of the seventeen criteria in comparison to a base condition (which approximated current biological and hydrodynamic conditions) and in comparison to the other options.

The evaluation of the options was based primarily on the results of hydrodynamic modeling (CALSIMII and DSM2) and on the opportunities for habitat restoration afforded by each. To conduct the modeling, the Steering Committee directed its consultant team to identify a range of water operational values, represented by two scenarios, which were used as key model input parameters. Results for each of the scenarios provided the Steering Committee with information relating to the relative flexibility of each option to meet conservation and water supply objectives.

The purpose of the Options Evaluation was to assist the Steering Committee in better understanding of the implications – positive and negative – of each of the four options and their potential capacity to meet overall BDCP goals and objectives. On the basis of the Options Evaluation and on other relevant reports and information,<sup>1</sup> the Steering Committee arrived at agreement on these approaches.

#### **4.0 Next Steps for the BDCP**

This section highlights the various topics that the Steering Committee will likely address in the upcoming months as it begins the planning process for the development of the BDCP. These "next steps" are not intended to reflect all the steps that will be involved in the planning process, but rather they identify the key areas of focus for the Steering Committee and the consultant team over the next several months. The attachment to this memorandum provides an example of a more complete enumeration of the many elements which may, ultimately, comprise the BDCP. Early focus on the topics identified below will allow for other plan elements to be developed in a timely and orderly manner.

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<sup>1</sup>These reports include the CALFED Bay-Delta Program, Diversion Effects on Fish: Issues and Impacts, June 25, 1998; the CALFED Bay-Delta Program, Diversion Effects on Fish: Evaluation of a Revised Through-Delta Scenario, September 28, 1998; the CALFED Bay-Delta Program: Final Programmatic EIR/EIS, 2000; and the California Resources Agency, Pelagic Fish Action Plan, March 2007.

- **Biological Goals and Objectives.** Define the preliminary biological goals and objectives to guide initial plan development, including preliminary goals for each covered species to meet the conservation and management goals in section 3 of the Planning Agreement.
- **Habitat Restoration and Enhancement Program.** Develop the major program elements of the in-Delta and Suisun Marsh habitat restoration program. Identify the location of habitat restoration opportunity areas and describe the potential conservation benefits to covered species at each location.<sup>2</sup>
- **Conservation Actions to Address Other Stressors.** Develop other conservation program elements (not included in the habitat restoration program) to address other stressors in the Delta (e.g., toxics, non-native introductions, harvest) and identify which specific biological goals and objectives for covered species these elements would address.
- **Water Conveyance Facilities.** Develop and analyze potential designs, and identify key operational parameters, for the long-term conveyance system, including a new diversion in the north Delta and the improvement to through-Delta conveyance. Further identify those improvements that could be implemented in the early stages of plan implementation.
- **Existing Ecological Conditions.** Continue to gather data and information relevant to the conservation planning process and complete a preliminary description of the existing ecological conditions in the Delta, including ecological profiles for each of the nine covered fish species.
- **Analytical Tools.** Identify the suite of analytical tools and models that will support thorough, scientifically defensible analyses of the potential benefits and impacts associated with conservation strategies developed for the BDCP. Such tools would be used to assess the ability of the plan to achieve its applicable conservation and water supply objectives.
- **In-Delta Water Quality.** Identify issues relating to the potential effect of the conveyance system on in-Delta water quality and of other potential actions that may help meet appropriate water quality objectives for the duration of the plan.

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<sup>2</sup> Habitat restoration within Suisun Marsh will be coordinated with the ongoing Suisun Marsh Restoration and Management planning processes.

## Attachment A

### Working Draft BDCP HCP/NCCP Document Table of Contents

**Note:** This working draft table of contents is intended to inform the Steering Committee of the likely contents and organization of the BDCP HCP/NCCP document (some sections are discretionary and some are required for compliance under ESA section 10 and NCCPA).

#### **Executive Summary**

#### **Chapter 1. Introduction**

- 1.1 Background
- 1.2 BDCP Goals and Objectives
- 1.3 Regulatory Context
- 1.4 Scope of the BDCP
- 1.5 Overview of the BDCP Development Process

#### **Chapter 2. Existing Ecological Conditions**

- 2.1 Introduction
- 2.2 Historical Conditions
- 2.3 Current Ecological Conditions
- 2.4 Biodiversity

#### **Chapter 3. Conservation Strategy**

- 3.1 Introduction
- 3.2 Biological Goals and Objectives
- 3.3 Approach to Conservation
- 3.4 Conservation Concepts
- 3.5 Ecosystem Level Conservation Measures
- 3.6 Natural Community Conservation Measures
- 3.7 Species-Specific Conservation Measures
- 3.8 Implementation Schedule
- 3.9 Monitoring and Research
- 3.10 Adaptive Management

#### **Chapter 4. Description of Covered Activities**

- 4.1 Introduction
- 4.2 Water Deliveries
- 4.3 Existing Water Supply Facilities Operations and Maintenance
- 4.4 New Water Supply Facilities and Operations and Maintenance
- 4.5 Mirant Energy Water Use

#### **Chapter 5. Assessment of Impacts and Level of Take**

- 5.1 Introduction and Approach
- 5.2 Regulatory Context and Environmental Baseline
- 5.3 Impact Assessment Methods



- 5.4 Impacts on Covered Natural Communities
- 5.5 Impacts on Covered Species
- 5.6 Cumulative Effects
- 5.7 Indirect Effects Outside of the Planning Area

**Chapter 6. Plan Implementation**

- 6.1 Implementation Schedule
- 6.2 Compliance Monitoring and Reporting
- 6.3 Regulatory Assurances and Changed and Unforeseen Circumstances
- 6.4 Permit Duration, Amendment, Renewal, and Enforcement

**Chapter 7. Implementation Structure**

**Chapter 8. Implementation Costs and Funding Sources**

- 8.1 Cost to Implement the BDCP
- 8.2 Funding Sources and Assurances

**Chapter 9. Alternatives to Take Considered**

**Chapter 10. Independent Science Advisory Process**

**Chapter 11. List of Preparers**

**Chapter 12. References**

**Appendices**

The following are potential appendices to the BDCP HCP/NCCP document.

- Covered Species Accounts
- SWP and CVP Contracts Covered by the Plan
- Hydrologic/Hydrodynamic Analyses
- Acronyms and Abbreviations used in the BDCP HCP/NCCP
- Glossary of Terms used in the BDCP HCP/NCCP
- List of Species Mentioned in the BDCP HCP/NCCP
- Methods for Delineating Natural Communities and Constituent Habitat Types
- Covered Natural Communities x Species Matrix