

BDCP

BAY DELTA CONSERVATION PLAN

In 2011, the California Natural Resources Agency took action to:

- ▶ Involve a broader range of stakeholders in the planning process
- ▶ Ensure a robust, science-supported process
- ▶ Identify alternatives that reflect varying conveyance sizes and features, and habitat restoration options
- ▶ Make significant refinements to habitat conservation measures
- ▶ Establish a comprehensive set of biological goals and objectives
- ▶ Make draft technical documents available to the public

Work to be completed in 2012 will help to achieve the Sacramento-San Joaquin Delta's (Delta) co-equal goals of ecological restoration and improved water supply reliability for the 25 million Californians and agricultural lands that rely on it.

“California must implement a science-based plan to ensure safe and adequate water supplies while addressing the severe ecological challenges facing the Delta.”

— JOHN LAIRD, SECRETARY
CALIFORNIA NATURAL RESOURCES AGENCY

What's at stake?

- ▶ Twenty-five million Californians in the San Francisco Bay Area, the Central Valley, and Southern California rely on water that flows through the Delta.
- ▶ This water also helps produce nearly half of the nation's domestically grown fresh produce, supporting a \$27 billion agricultural industry.
- ▶ Without changes to the way the water currently flows through the Delta, serious impacts will affect the economy and environment.

Threats to the Delta include:

- ▶ Ecological collapse
- ▶ Lack of sufficient water supplies
- ▶ Impacts caused by climate change and sea level rise
- ▶ Seismic activity from nearby active faults

- Established in 2006.
- Provides a 50-year conservation plan with an ecosystem-based approach.
- Seeks to restore and protect up to 133,000 acres of habitat.
- Covers 11 fish species and 52 wildlife and plant species, many of which are threatened or endangered.
- Helps to reconnect floodplains, develop new tidal marsh, return riverbanks to a more natural state, decrease toxicity, control invasive species, and align water operations to better reflect natural seasonal flow patterns.
- Represents extensive scientific investigation and analysis.
- Informed by more than 400 public, working group, and stakeholder meetings.
- Creates the largest Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) in the U.S.

REFINEMENTS TO HABITAT CONSERVATION MEASURES

YOLO BYPASS FISHERY ENHANCEMENT

The Yolo Bypass Fishery Enhancement Planning Team, representing local agricultural and waterfowl interest groups, landowners, Yolo County, flood protection agencies, state agencies, and water contractors, significantly advanced development of the Yolo Bypass Fishery Enhancement conservation measure. This conservation measure will help salmon and other fish species by:

- ▶ Improving the ability of fish to migrate between the Sacramento River and the Pacific Ocean
- ▶ Creating more and better spawning and rearing habitat
- ▶ Increasing food supplies and availability for fish
- ▶ Reducing exposure of fish to predators

To meet these objectives, the measure calls for improving the timing, frequency, and duration of flows through in the Yolo Bypass, adding fish ladders, making flood control structures more fish-friendly, and realigning Putah Creek, among other actions. The planning team's local knowledge provided valuable input on how to make fishery restoration compatible with agriculture, waterfowl, flood protection and other uses in the Yolo Bypass.

This document is a summary of 2011 BDCP accomplishments in habitat restoration measures, alternatives, water supply, biological goals and objectives, and scientific review. More detailed information about these elements is included in the December 2011 working draft chapters of the BDCP and Environmental Impact Report/Environmental Impact Statement (EIR/EIS) documents available online at www.BayDeltaConservationPlan.com.



SOUTH DELTA HABITAT AND FLOOD MANAGEMENT IMPROVEMENT

The South Delta Habitat Working Group, composed of local and regional government representatives, non-governmental organizations, and applicable fish and resources agencies, examined several approaches to fish migration habitat and flood management improvement corridors. The team identified specific flood control and habitat projects that have the highest potential flood benefits and most promising habitat improvement elements.

Based on these findings, potential floodplain habitat was identified as compatible with flood management objectives and in coordination with ongoing flood and ecosystem planning programs in the South Delta.

Working group participants have provided important input regarding community values, vital infrastructure locations, and historical significance of existing land uses. By early 2012, the team expects to quantify flood benefits and risk transfer (if any), and identify positive and negative ecological effects. Constraints, opportunities, data gaps, and outstanding uncertainties that can be resolved in subsequent development phases will be identified.

“The Bay Delta Conservation Plan is without a doubt one of the largest and most complex science-based ecosystem restoration programs ever undertaken... We will continue to work... to ensure sound scientific justifications for any potential actions. Fish, farms, and the 25 million Californians who depend on the Delta for their water deserve nothing less.”

— JOHN LAIRD, SECRETARY
CALIFORNIA NATURAL RESOURCES AGENCY



RANGE OF ALTERNATIVES

During 2011, the following alternatives, and variations of these alternatives, were developed prior to the selection of a final BDCP. These alternatives differ primarily in the location, design, size, and operation of water conveyance facilities. The range of alternatives also includes varying types of habitat restoration.

Alternative	Conveyance Type	North Delta Diversion Capacity	Number of Intakes	Potential Operational Scenario ^{†‡}
*Dual Conveyance	Pipeline/Tunnel, or East Canal, or West Canal	15,000 cubic feet per second (cfs)	Five	A or B
*Dual Conveyance	Pipeline/Tunnel	6,000 cfs	Two	A
*Dual Conveyance	Pipeline/Tunnel	9,000 cfs	Three	B, E, or F
*Dual Conveyance	Pipeline/Tunnel	3,000 cfs	One	C
† Isolated Conveyance	Pipeline/Tunnel, or East Canal, or West Canal	15,000 cfs	Five	D
Through-Delta/ Separate Corridors	Through-Delta Channel Modifications	15,000 cfs	Screened intakes at Delta Cross Channel and Georgiana Slough	G

* The “dual” conveyance water delivery system would consist of the new north Delta diversion facilities and the existing State Water Project/Central Valley Project (SWP/CVP) export facilities in the south Delta. The north Delta diversion would be the primary diversion point using specific operating criteria and would be operated in conjunction with the existing south Delta diversion when necessary.

† “Isolated” conveyance means that no water would be diverted from Delta channels.

‡ See Operational Scenarios chart on next page.

BIOLOGICAL GOALS AND OBJECTIVES

The Biological Goals and Objectives Working Group assembled an independent science review panel to provide a roadmap for goals and objectives for fish species. In 2011, comprehensive biological goals and objectives were created for the following fish species:

- ▶ Chinook Salmon
- ▶ Delta Smelt
- ▶ Longfin Smelt
- ▶ Pacific and River Lamprey
- ▶ Sacramento Splittail
- ▶ White Sturgeon
- ▶ Green Sturgeon

The biological goals and objectives articulate the desired biological outcomes of a conservation strategy, describe how those outcomes will contribute to the long-term conservation of covered species and their habitats, and provide measures to assess progress in achieving desired outcomes.



Delta smelt

For more information visit the **Biological Goals and Objectives Working Group** web page at www.BayDeltaConservationPlan.com

OPERATIONAL SCENARIOS†

The following operational scenarios are described in detail in the *BDCP Draft EIR/EIS* (Chapter 3 – Alternatives, Section 3.3.1.2), available online at www.BayDeltaConservationPlan.com.

Scenario A	Would include specific criteria guiding water supply parameters at a variety of locations and facilities. This includes criteria for: north Delta diversion bypass flows; south Delta channel flows; Fremont Weir/Yolo Bypass operations; Delta inflow and outflow; Delta Cross Channel gate operations; Rio Vista minimum instream flows; Delta water quality and residence time, and in-Delta agricultural, municipal, and industrial water quality requirements (<i>BDCP Steering Committee handout, 2/11/10</i> - www.BayDeltaConservationPlan.com).
Scenario B	Would incorporate criteria for the same elements as those referenced under Scenario A. This scenario would add an operable barrier at Head of Old River.
Scenario C	Would adopt the operational guidelines of Scenario A north of the Delta. South of the Delta, Scenario C would rely upon existing Biological Opinions with flows to protect Delta smelt, Old River and Middle River flows, and San Joaquin River export and inflow ratio.
Scenario D	Would be modified from Scenario A to eliminate use of south Delta intakes and add criteria surrounding Fall X2.
Scenario E	Would be modified from Scenario A.
Scenario F	Increased Delta outflow, as requested by State Water Resources Control Board.
Scenario G	Would be similar to those described under Scenario A, but would be modified to conform to the conveyance components of the separate corridors option.

Example of Species-Specific Biological Goals and Objectives

The aquatic biological goals and objectives include:

- Species-specific goals and objectives
- Scientific data, habitat restoration best management practices, and a life-history rationale supporting each goal and objective
- Overview of how the conservation strategy, if implemented, will help attain each goal and objective
- When applicable, specific numeric goals for each life stage of each species

Delta Smelt*	
BDCP Species Goals:	Improved survival of Delta smelt within the plan area.
BDCP Delta Smelt Growth Objective:	Increase mean body length by at least 2 mm from existing conditions within 15 years of implementation.
BDCP Adult Migration Objective:	Reduce delays in adult migration in Delta to less than 1.5 days within 15 years of implementation.

* *BDCP Working Draft Covered Fish Species Goals and Objectives, October 13, 2011*

OTHER WORKING GROUP ACTIVITIES

The Governance Working Group

provided input on the roles of the various participants responsible for executing and informing implementation of the BDCP.

The Finance Working Group

discussed potential sources of funding for BDCP, including project water users.

The Adaptive Range Working Group

discussed approaches to adaptive limits on the amount of water that could be exported from the Delta under BDCP.

EFFECTS ANALYSIS AND SCIENTIFIC REVIEW

Because the BDCP will alter the physical and biological environment of the Delta, it includes an Effects Analysis (EA) to describe predicted effects on biological performance, particularly with regard to species' population levels. The EA is a systematic, scientific look at both potential impacts, and potential benefits, from conservation actions.

In 2011, the Delta Stewardship Council convened a seven-member independent scientific review panel to assess the scientific quality of the working draft of the Effects Analysis Conceptual Foundation and Analytical Framework, as well as the Entrainment Appendix. The panel made recommendations on:

- ▶ Goals, purpose, objectives, and scope
- ▶ Completeness, structure, effectiveness of description
- ▶ Approach and analysis
- ▶ Models
- ▶ Scale and rigor of the analysis
- ▶ Interpretation and conclusions

In early 2012, the panel will reconvene to conduct a technical evaluation of the Effects Analysis. The efforts of the panel will help raise the level of certainty associated with the findings of the Effects Analysis, and help to ensure that it is of sufficient scientific quality to serve its intended purposes.

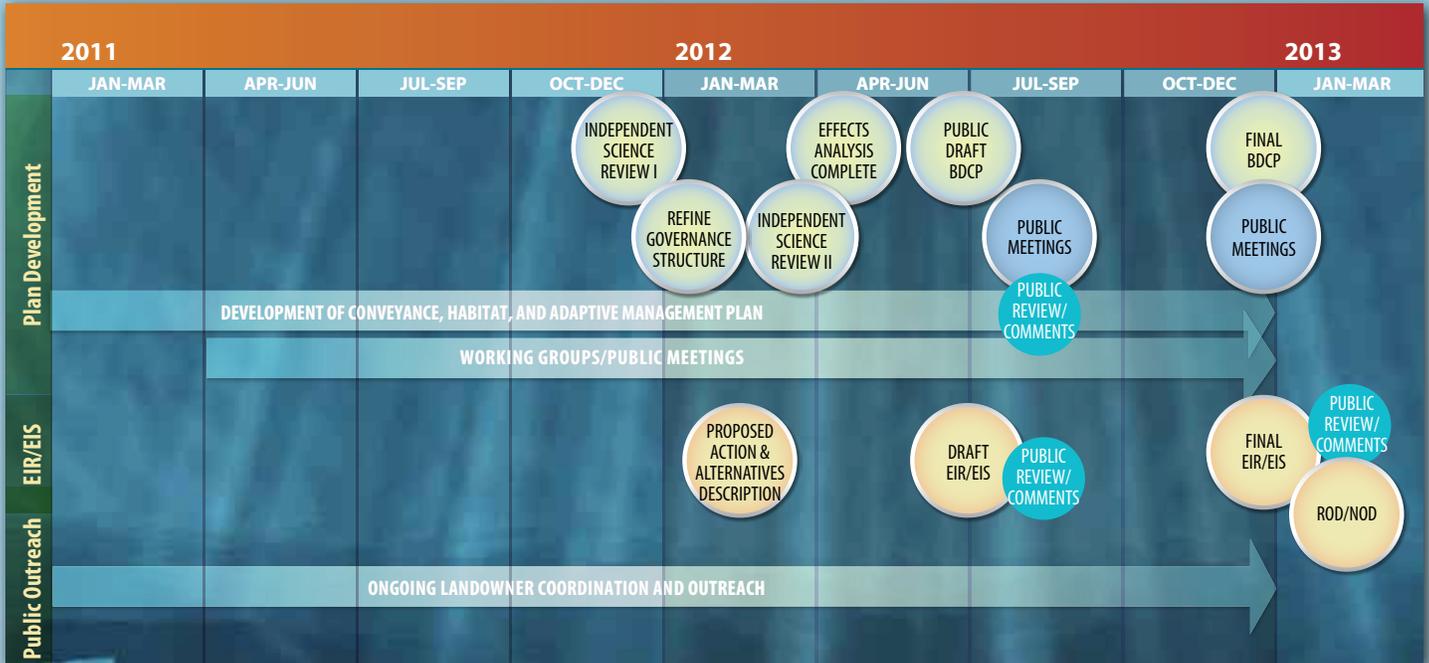
The Delta Science Panel will also conduct an in-depth review of the Draft EIR/EIS.



NEXT STEPS FOR 2012

The BDCP will complete a draft plan and move towards project certification and implementation by 2013. The first quarter of 2012 will include further independent science review and completion of the Draft Effects Analysis, refinements to cost estimates and financing options, and

a more defined governance and adaptive management structure. By summer, the public Draft BDCP will be finalized and made available for public review and comment. Public input received on the Draft BDCP will inform the final document, scheduled for release in late 2012.



BDCP Environmental Review

The BDCP will have environmental impacts that will be disclosed and evaluated in an EIR/EIS. The EIR/EIS is being conducted by four state and federal agencies. The California Department of Water Resources is the state lead agency under the California Environmental Quality Act (CEQA), while the Bureau of Reclamation, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service are serving as the federal co-leads under the National Environmental Policy Act (NEPA). The EIR/EIS is also being developed in close coordination with the California Department of Fish and Game, the California State Water

Resources Control Board, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.

These agencies will continue work over the coming months to complete the environmental review documents by fully identifying and thoroughly analyzing environmental impacts, describing alternatives to the BDCP, and developing mitigation measures.

Preliminary Draft EIR/EIS chapters are available online at www.BayDeltaConservationPlan.com.

An aerial photograph of a river delta, likely the Sacramento-San Joaquin River Delta in California. The image shows a complex network of water channels and levees. On the left, there are large, rectangular green agricultural fields. The water is a deep blue, and the surrounding land is a mix of green and brown, indicating different types of vegetation and soil. The sky is a clear, light blue.

For more information, visit
www.BayDeltaConservationPlan.com
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