Workshop Purpose

• Update on BDCP development

• Present draft conservation strategy

• Receive public input on conservation measures
  – Assumptions / rationale / problem statement
  – Ideas for other types of conservation measures
  – Feasibility of the draft conservation measures

• Comments provided to BDCP Steering Committee
• Introduction/brief presentation

• Breakout groups
  – Habitat restoration
  – Conveyance / flows
  – Other stressors

• Report back in plenary
BDCP Planning Process

Natural Community Conservation Planning Act

Natural Community Conservation Plan

Federal Endangered Species Act

Habitat Conservation Plan

BDCP PLANNING PROCESS

Develop comprehensive regional plan for fish protection and water supply reliability

Steering Committee • Staff/Consultants

Draft Conservation Measures → Draft Conservation Strategy → 1st Draft BDCP → Public Draft BDCP

YOU ARE HERE

BAY DELTA CONSERVATION PLAN
Status of Strategy Development

Potential Conservation Measures

Conservation Plan

- Biological Evaluations
- Impact Assessment
- Implementation Feasibility
- Practicability
- Economic Analysis

We Are Here

December 2009
Conservation Strategy – How it Works

**Biological Goals & Objectives**
- Broad principles
- Meet criteria of state/federal laws
- Objectives are targets to achieve goals

**Conservation Measures**
- Necessary actions to achieve biological objectives
- Satisfy state/federal requirements
- Three categories: water conveyance/operations; physical habitat restoration and protection; other stressors

**Adaptive Management**
- Use results from new information
- Adjust implementation of conservation measures

**Monitoring**
- Monitor effects of plan implementation
- Determine if biological results are achieved over time
Existing Water Operations
Five fundamental ways that BDCP intends to help fish and their habitats through operations:

1. Water operations
   - Align water operations to mimic natural seasonal flow patterns
   - Improve and better approximate natural flow in the estuary

2. Reduce physical impact of a southern diversion point

3. Protect fish with state-of-the-art fish screens

4. Re-connect aquatic habitats
Throughout the remainder of 2009 and early 2010 the BDCP will support locally led conservation efforts and compatible existing land management practices in the Delta to enhance benefits to natural communities and species and to complement other existing or planned terrestrial HCP/NCCPs in the region.

Where feasible, BDCP conservation measures will be designed to complement other existing or planned terrestrial HCP/NCCPs in the Delta to enhance benefits to natural communities and species and to support locally led conservation efforts and compatible existing land uses to the extent possible.

What’s Next
Throughout the remainder of 2009 and early 2010 the BDCP participants will:

- Conduct ongoing refinements to conservation measures such as the operations of dual conveyance water facilities, habitat restoration measures for covered wildlife and plant species, and the design of a robust adaptive management program.
- Continue to develop biological goals and objectives and related metrics.
- Develop other aspects of the Bay Delta Conservation Plan such as:
  - Analysis of the conservation strategy’s effects on water quality and biological resources
  - Cost and financing
  - Implementation structure and schedule
- Host Delta community workshops on the Draft Conservation Strategy
- Release to the public the complete Draft Bay Delta Conservation Plan for public comment

www.resources.ca.gov/bdcp/

Draft Conservation Strategy—August 2009 Update
The purpose of the Bay Delta Conservation Plan (BDCP) is to promote the recovery of endangered, threatened, and sensitive species and their habitats in the Delta in a way that also will protect and restore water supplies.

The BDCP is a habitat conservation plan and natural communities conservation plan under federal and state laws, respectively. When completed, the BDCP would provide the basis for the issuance of endangered species permits for the operation of the state and federal water projects. The plan would be implemented over the next 50 years. The heart of the BDCP is a long-term conservation strategy that sets forth actions needed for a healthy Delta ecosystem.

Environmental organizations, water agencies, and other organizations preparing the BDCP have made significant progress on aspects of the draft conservation strategy focused on helping the Delta and contributing to the recovery of 11 native fish species. The aquatic portion of the draft strategy describes how moving the primary point of water diversion of the state and federal projects from the southern Delta near Tracy to the Sacramento River near Clarksburg and Freeport will alter flow patterns in the estuary to promote fish recovery and provide for reliable water supplies. New water delivery facilities and new operating rules coupled with habitat restoration and efforts to reduce the negative effects of stressors like contaminants and invasive species will be undertaken together to address the threats to native fish survival and recovery.

The Importance of the Delta Cannot Be Overstated
The Sacramento—San Joaquin River Delta is home to half a million people and many historic communities. It is a key recreation destination and supports extensive infrastructure of statewide importance. Fresh water that reaches the Delta is the core of California’s water system, which provides 25 million people throughout the Bay Area, the Central Valley, and southern California with a portion of their water supplies. Delta-conveyed water supports farms and ranches from the north Delta to the Mexican border. These agricultural resources are a major economic driver for the state, producing roughly half of the nation’s domestically grown fresh produce. The Delta is also a vitally important ecosystem that is home to hundreds of aquatic and terrestrial species, many of which are unique to the area and several of which are threatened or endangered.

Who Is Participating In the BDCP?
The BDCP is being prepared through a voluntary collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. The BDCP Steering Committee consists of the following participants.

STATE AND FEDERAL AGENCIES
California Bay-Delta Authority
California Department of Water Resources
California Natural Resources Agency (chair)
California State Water Resources Control Board
US Bureau of Reclamation
US Army Corps of Engineers
FISH AGENCIES
California Department of Fish and Game
US Fish and Wildlife Service
US National Marine Fisheries Service
WATER AGENCIES
Kern County Water Agency
Metropolitan Water District of Southern California
San Luis & Delta-Mendota Water Authority
Santa Clara Valley Water District
Westlands Water District
Zone 7 Water Agency
Contra Costa Water District
Friant Water Authority
North Delta Water Agency
ENVIRONMENTAL ORGANIZATIONS
American Rivers
Defenders of Wildlife
Environmental Defense Fund
Natural Heritage Institute
The Bay Institute
The Nature Conservancy
OTHER ORGANIZATIONS
California Farm Bureau Federation
Mirant Delta

Environmental organizations, water agencies, and other organizations preparing the BDCP have made significant progress on aspects of the draft conservation strategy focused on helping the Delta and contributing to the recovery of 11 native fish species. The aquatic portion of the draft strategy describes how moving the primary point of water diversion of the state and federal projects from the southern Delta near Tracy to the Sacramento River near Clarksburg and Freeport will alter flow patterns in the estuary to promote fish recovery and provide for reliable water supplies. New water delivery facilities and new operating rules coupled with habitat restoration and efforts to reduce the negative effects of stressors like contaminants and invasive species will be undertaken together to address the threats to native fish survival and recovery.

The Importance of the Delta Cannot Be Overstated
The Sacramento—San Joaquin River Delta is home to half a million people and many historic communities. It is a key recreation destination and supports extensive infrastructure of statewide importance. Fresh water that reaches the Delta is the core of California’s water system, which provides 25 million people throughout the Bay Area, the Central Valley, and southern California with a portion of their water supplies. Delta-conveyed water supports farms and ranches from the north Delta to the Mexican border. These agricultural resources are a major economic driver for the state, producing roughly half of the nation’s domestically grown fresh produce. The Delta is also a vitally important ecosystem that is home to hundreds of aquatic and terrestrial species, many of which are unique to the area and several of which are threatened or endangered.
Conservation Strategy: How It Works

The current draft conservation strategy identifies biological goals and objectives to improve large-scale ecosystem conditions and the health of covered species; a comprehensive set of conservation measures developed to meet these goals and objectives; and monitoring and adaptive management programs to maximize the effectiveness of the strategy over the course of its implementation.

Biological Goals & Objectives

Biological goals are broad principles that guide the management program will inform what modifications to the conservation measures may be necessary.

Adaptive Management

Using results of new information to adjust the implementation of conservation measures.

Monitoring

Monitoring the effects of the plan’s implementation to determine whether it is producing over time the biological results anticipated by the plan.

Conservation Measures

Conservation Measures include all actions thought to be necessary to achieve the biological objectives of the plan and to satisfy state and federal regulatory requirements. Conservation measures grouped into water conveyance and operations, physical habitat restoration, habitat protection, and other stressors.

Draft Conservation Strategy Elements

<table>
<thead>
<tr>
<th>Habitat Restoration Targets</th>
<th>Water Delivery Rules</th>
<th>Other Stressors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restore up to 80 acres of tidal marsh, seasonally inundated floodplain, and riparian habitat distributed throughout the Delta.</td>
<td>North Delta Diversion and Bypass Flows</td>
<td>Support scientific evaluation of ammonia and endocrine disrupter effects on fish species.</td>
</tr>
<tr>
<td>Enhance 11,500–21,000 acres of existing seasonal floodplain habitat in the Yolo Bypass.</td>
<td>• Diversion facilities to support flexibility in flow management, with a design capacity of 15,000 cubic feet per second, which is similar to existing south Delta facilities.</td>
<td>Reduce methylmercury.</td>
</tr>
<tr>
<td>Enhance up to 20 linear miles of channel bank restoration to create a more natural riverbank with overhanging shade, in-stream woody debris, and shallow benches.</td>
<td>• Establish minimum river flows to ensure that Sacramento River flows are always greater than export diversions and that flows support the habitat needs of covered fish and the ecological needs of the Delta as a whole.</td>
<td>Support existing programs and voluntary incentive-based actions to reduce agricultural pesticides and herbicides and clean urban stormwater runoff.</td>
</tr>
<tr>
<td>Monitoring the effects of the plan’s implementation to determine whether it is producing over time the biological results anticipated by the plan.</td>
<td>• Minimize incidence and magnitude of reverse flow to acceptable levels during the times of year most important to fish and also reduce entrainment.</td>
<td>Improve hatcheries, reduce poaching, and allow greater harvest of largemouth bass, black crappie, and striped bass in some areas of the Delta.</td>
</tr>
<tr>
<td>Provide new operating rules to (1) better manage inflows, (2) better manage the flow of water through the Delta Cross Channel and at Rio Vista, and (3) address water quality throughout the central and south Delta.</td>
<td>Outflow:</td>
<td>Screen, remove, relocate, consolidate, modify, and/or alter timing of non-project diversions to reduce entrainment.</td>
</tr>
</tbody>
</table>

ROLES OF SCIENCE IN DEVELOPING THE DRAFT CONSERVATION STRATEGY

The BDCP Conservation Strategy is built upon and reflects the extensive body of scientific investigation, study, and analysis of the Delta available. The BDCP Steering Committee also undertook a rigorous process to develop new and updated information, including an evaluation of conservation options using the CALFED Bay-Delta Ecosystem Restoration Program’s DREIP evaluation process conducted by multiple teams of experts in early 2009. The BDCP Steering Committee sought and utilized independent scientific advice at several key stages of the planning process, enlisting well-recognized experts in ecological and biological sciences to produce recommendations on a range of relevant topics, including conservation planning for both aquatic and terrestrial species and developing adaptive management and monitoring programs. This independent panel will continue to convene as the plan is developed, and ongoing scientific input will be provided during plan implementation.

BENEFITS OF REGIONAL CONSERVATION PLANNING

Conservation plans:

- Allow operations of state and federal water projects to proceed with a comprehensive ecosystem-focused approach that provides for the conservation of affected species and habitats.
- Eliminate more costly, often less effective piecemeal project-by-project, species-by-species permitting.
- Provide flexibility in addressing those issues that are most effective for promoting the conservation of covered species.
- Are based on the best available science.
- Provide reliable funding sources for ecosystem restoration.

For more information, contact Karla Nemeth at 916-651-7587.
The Bay Delta Conservation Plan will include a comprehensive approach for restoring key natural ecosystem functions in the Delta’s highly altered environment. A central component of this plan focuses on aquatic habitat conservation, which includes seasonally inundated floodplain, riparian, channel margin, and tidal marsh restoration and enhancement in strategic locations throughout the Delta. Although specific restoration and enhancement sites may not be identified until plan implementation, the chart below and map at right note potential areas where habitat restoration could occur after additional review and environmental analysis. Please see reverse page for more information about future site selection criteria and management plans.

### PROPOSED HABITAT RESTORATION AND ENHANCEMENT TARGETS, AREAS AND ACREAGE TARGETS

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Phasing of Restoration Over Time</th>
<th>Potential Area (general location)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Margin</td>
<td>By Year 10 20 linear miles</td>
<td>Any project levees: along the San Joaquin River and other levees anywhere in the planning area that are important to salmon. In the north Delta, current interest is focused on Steamboat and Sutter sloughs.</td>
<td></td>
</tr>
<tr>
<td>Floodplain (new)</td>
<td>By Year 40 1,000 Acres 10,000 Acres</td>
<td>Anywhere in the planning area, with current interest along the San Joaquin River downstream of Vernalis; on Fabian tract along Old River; on Union Island and Upper Roberts Island on Middle River. The plan currently identifies a narrow area along the eastern alignment of the Sacramento Deep Water Ship Channel as a potential new flood bypass for future study.</td>
<td></td>
</tr>
<tr>
<td>Floodplain (enhanced existing)</td>
<td>By Year 10 11,500–21,000</td>
<td>Increased frequency and duration of existing floodplain inundation in the Yolo Bypass targeting inundation for 30 to 45 days from December to April.</td>
<td></td>
</tr>
<tr>
<td>Tidal Marsh</td>
<td>By Year 10 14,000 Acres 25,000 Acres 65,000 Acres</td>
<td>Minimum acreage targets set in Restoration Opportunity Areas (ROAs) as noted at right. Initial restoration would be focused on Cache Slough, Suisun, and West Delta ROAs. Over the 50-year plan horizon, restoration would be expanded within these areas, and additional restoration would be located in Cosumnes-Mokelumne, East Delta, and South Delta ROAs.</td>
<td></td>
</tr>
<tr>
<td>Riparian</td>
<td>By Year 10 1,300 Acres 2,100 Acres 5,000 Acres</td>
<td>Potentially anywhere in the planning area, although favoring locations where other restoration is occurring as appropriate.</td>
<td></td>
</tr>
</tbody>
</table>

Potential new floodplain habitat along the Sacramento Deep Water Ship Channel and in the south Delta would be contingent on integration of possible combined flood control benefits, as well as significant cost-sharing from flood control partners at the federal, state and local levels.

For more information, contact Karla Nemeth at 916-651-7587.
**Future Site Selection Criteria**

The following is a list of some of the site selection criteria that will be used, along with local input, to identify lands for habitat restoration and enhancement.

**Feasibility**
- Minimal effects on existing land uses
- Site availability
- Cost effectiveness in implementing restoration
- Potential effects on mosquito vector control

**Biological Attributes**
- Ability to achieve multiple biological objectives for multiple species
- Proximity to channel systems that could benefit from restoration (e.g., increased tidal flows may help reduce bi-directional flows in upstream channels, or support greater mixing in channels, both of which are beneficial for native fish)
- Capacity to contribute to more natural transitions between habitats in the Delta (seasonal wetland, riparian, grassland)
- Proximity to existing habitats so that new restoration adds to and develops habitat corridors for fish and wildlife
- Minimal effects of other stressors (such as nearby water diversions or discharges of low quality water) that could offset intended fish and wildlife benefits

**Habitat Restoration Management Plans**

Individual habitat management plans will guide long-term management of restoration sites and will include:
- Biological goals and objectives to be met by the restoration activity
- Site-specific monitoring requirements and approach to adaptive management
- Controls for invasive plants
- Controls for non-native predators and competitor species
- Vegetation management and infrastructure maintenance
- Public access and other allowable uses

**Important Habitat Strategy Concepts**

One of the primary conservation benefits of separating the water supply system from the Delta estuary is that it creates the ability to restore critical ecosystem functions—such as spawning and rearing habitat, production of food for fish, and fish migration patterns—throughout the Delta that are essential for species recovery.

Broad geographic distribution of habitat throughout the estuary is intended to improve ecological processes and function. During the first 10 years of implementation, while the Delta estuary remains the sole water supply conveyance route, habitat restoration would be focused in the north and west Delta and Suisun Marsh. After a dual conveyance system is operational, habitat restoration would be expanded to the Mokelumne and San Joaquin River areas. This approach is intended to help fish species recover by improving productivity and habitat quality and their resilience to variations in the ecosystem that could occur with climate change.

Another overarching strategy guiding the conservation plan is to restore habitat in large patches to increase the likelihood of providing the desired levels of ecological functions and to support large numbers of covered species.

**Terrestrial Species**

The draft conservation strategy includes biological goals and objectives for more than 40 sensitive wildlife and plant species, and also provides for the development of conservation measures to help their recovery. Design of conservation measures for these species would build upon the habitat restoration components of this plan but also would include additional habitat protection measures to complement the strategies of locally led conservation plans in areas next to and overlapping the Delta, many of which recognize and acknowledge the terrestrial habitat value of working agricultural lands in the Delta. Plant and wildlife conservation measures would be implemented in coordination with the local organizations in a way that complements local habitat conservation goals and, where feasible, would build on compatible existing land uses (as through conservation easements and wildlife-friendly agriculture).

**Frequently Asked Questions**

Q: How much land and what locations are identified for potential habitat restoration?

A: The draft Conservation Strategy identifies acreage targets for various habitat restoration types that would be a legal requirement of the plan. It identifies general areas where restoration could be focused, such as potential suitable tidal marsh restoration areas and floodplain enhancement in the Yolo Bypass. It also identifies areas of particular interest for further habitat restoration study, such as Steamboat and Sutter Sloughs (channel margin enhancement), and Old and Middle Rivers (restoration of seasonally inundated floodplain habitat) although these types of habitat restoration potentially could occur in numerous places throughout the statutory Delta and Suisun Marsh.

Q: How would landowners be affected by restoration activities?

A: If the BDCP is approved, its implementing entity would identify and evaluate specific lands based in part on restoration suitability and the willingness of landowners to sell their property or grant conservation easements. Once a location is identified, habitat restoration designs and long-term habitat restoration management plans will be developed. This detailed information will be subject to site-specific environmental review in addition to the environmental review currently underway on the entire BDCP so that impacts can be adequately identified and mitigated.

Q: What would happen to habitat restoration activities planned, in progress, or needing monitoring if there is not enough funding?

A: All lands acquired by the BDCP for habitat restoration would be managed in perpetuity. As required by law, the BDCP will include a cost and financing plan for all conservation measures, including habitat restoration.
### ACRONYMS and DEFINITIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Management</td>
<td>Using results of new information to adjust the implementation of conservation measures</td>
</tr>
<tr>
<td>Aquatic Species</td>
<td>Plants and animals that live or grow in water</td>
</tr>
<tr>
<td>BDCP</td>
<td>Bay Delta Conservation Plan, a conservation plan prepared to meet the requirements of the Federal Endangered Species Act, California Endangered Species Act and/or the Natural Community Conservation Planning Act</td>
</tr>
<tr>
<td>Biological Goals</td>
<td>Broad principles that guide the conservation strategy to meet statutory criteria of state and federal law</td>
</tr>
<tr>
<td>Biological Objectives</td>
<td>Measurable targets for achieving biological goals.</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CESA</td>
<td>California Endangered Species Act</td>
</tr>
<tr>
<td>Conservation Measures</td>
<td>All actions thought to be necessary to achieve the biological objectives of the plan and to satisfy state and federal regulatory requirements.</td>
</tr>
<tr>
<td>Covered Activities</td>
<td>Activities to be identified in the BDCP that support water supply and power generation, including water conveyance (pipes, canals, and pumps) and facility maintenance and improvements</td>
</tr>
<tr>
<td>Covered Species</td>
<td>Species that are threatened or endangered in the Delta and potentially affected by certain water and energy projects to be identified in the BDCP</td>
</tr>
<tr>
<td>CVP</td>
<td>Central Valley Project—operated by the Bureau of Reclamation; irrigates more than 3 million acres of farmland and provides drinking water to nearly 2 million consumers</td>
</tr>
<tr>
<td>EIR/EIS</td>
<td>Environmental Impact Report / Environmental Impact Statement</td>
</tr>
<tr>
<td>Endangered</td>
<td>At risk of becoming extinct</td>
</tr>
<tr>
<td>Entrainment</td>
<td>The loss of fish and other organisms as a direct result of water diversion operations</td>
</tr>
<tr>
<td>ESA</td>
<td>Federal Endangered Species Act</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fishery Agencies</td>
<td>CA Department of Fish and Game (DFG), US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)</td>
</tr>
<tr>
<td>Flow</td>
<td>The rate, direction and volume of water movement through Delta channels</td>
</tr>
<tr>
<td>HCP</td>
<td>Habitat Conservation Plan—prepared pursuant to section 10(a) (1) (B) of ESA</td>
</tr>
<tr>
<td>Incidental Take Permit</td>
<td>Permit that allows for the take of listed species incidental to, and not the purpose of, an otherwise lawful activity</td>
</tr>
<tr>
<td>Invasive Species</td>
<td>Plants or animal species that are not native to the planning area, and that have (or could) adversely affect the natural community</td>
</tr>
<tr>
<td>Listed Species</td>
<td>Species designated as candidate, threatened or endangered pursuant to CESA and/or listed as threatened or endangered under ESA</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Monitoring the effects of the plan’s implementation to determine whether it is producing over time the biological results anticipated by the plan</td>
</tr>
<tr>
<td>NCCPA</td>
<td>Natural Community Conservation Planning Act</td>
</tr>
<tr>
<td>NCCP</td>
<td>Natural Community Conservation Plan, prepared to meet the requirements of Fish and Game Code, section 2800</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NOI/NOP</td>
<td>Notice of Intent (federal) and Notice of Preparation (state)</td>
</tr>
<tr>
<td>Non-Project Diversions</td>
<td>Diversions of water from the Delta that are not related to the CVP or SWP.</td>
</tr>
<tr>
<td>Planning Area</td>
<td>The legal Delta, which is the geographic area proposed to be addressed in the BDCP</td>
</tr>
<tr>
<td>PRE</td>
<td>Potential Regulated Entity—Those entities that may seek take authorizations, including federal and non-federal entities that export, divert, or utilize water from the Delta and/or its tributaries within the Planning Area for water supply or power generation</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rearing Habitat</td>
<td>Areas in Delta channels where juvenile fish find food and shelter to live and grow</td>
</tr>
<tr>
<td>Reverse Flow</td>
<td>River water that moves upstream (backward) instead of downstream.</td>
</tr>
<tr>
<td>Spawning Habitat</td>
<td>Aquatic habitat suitable for reproduction (e.g., egg laying and incubation)</td>
</tr>
<tr>
<td>Steering Committee</td>
<td>The principal forum within which key policy and strategy issues related to the BDCP are discussed and considered. Members of the Steering Committee include state, federal, and local water agencies; state and federal fish agencies; environmental organizations; and other interested parties</td>
</tr>
<tr>
<td>SWP</td>
<td>State Water Project—operated and maintained by the California Department of Water Resources; provides water supplies for 25 million Californians and 755,000 acres of irrigated farmland</td>
</tr>
<tr>
<td>Take</td>
<td>Defined in the federal and state Endangered Species Acts as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a threatened or endangered species</td>
</tr>
<tr>
<td>Terrestrial Species</td>
<td>Plants and animals that live on land</td>
</tr>
<tr>
<td>Threatened</td>
<td>At risk of becoming endangered in the foreseeable future</td>
</tr>
</tbody>
</table>
BDCP PLANNING PROCESS
Develop comprehensive regional plan for fish protection and water supply reliability

Steering Committee • Staff/Consultants

PROPOSED ACTION: BAY DELTA CONSERVATION PLAN

EIR/EIS PROCESS
Conduct environmental analysis

Lead Agencies • Staff/Consultants

Public Input

PROPOSED ACTION: BDCP

PREFERRED ALTERNATIVE

DRAFT EIR/EIS
A dual conveyance system, as envisioned by the BDCP, would create options that would move water through the Delta's interior or around the Delta through an isolated conveyance facility. The BDCP participants are evaluating how these water “operations” could be guided by new rules designed to be helpful for fish, but also to ensure enough of a flow of water to protect water quality and other habitat. Dual conveyance has the potential for providing the most options to meet the BDCP’s planning goals, and also for addressing the threat of levee failure posed by earthquakes and the effects of climate change.

These new rules are detailed requirements designed to provide improved habitat conditions for fish, including factors such as temperature, depth, turbidity, salinity, residence time and velocity. Providing these water attributes for fish is intended to benefit each species by: improving survival, fitness, distribution, growth rate; reducing mortality; providing spawning and rearing habitat; and providing nutrients. In addition, the rules help meet other objectives, such as reducing fish “entrapment” at the existing state and federal pumps.

Currently, pumps for the state and federal water projects are located in the southern Delta. Operation of the pumps is often detrimental for fish and their habitat. The pumps are strong, and can pull fish, nutrients and other organic matter toward the southern part of the Delta, at times creating reverse (backwards or upstream) flows. Under these current conditions, water operators do not have many options for changing these water flows, except to reduce the level of pumping.

In addition to meeting water supply reliability goals, the water conveyance approach envisioned by BDCP helps fish and their habitats in these five fundamental ways:

1. Aligning Water Operations to Mimic Natural Seasonal Flow Patterns
   - Current flow management operations seasonally store water in reservoirs for steady releases throughout the year. Flow management envisioned by the BDCP would allow for greater variability to flows seasonally when fish need it most.

2. Reduce Physical Impact of a Southern Diversion Point (Risk of Entrapment)
   - Diverting water from the southern Delta creates greater conflicts between water operations and the needs of fish than the northern Delta. By adding a point of diversion for the State Water Project and federal Central Valley Project in the northern Delta and allowing for real-time, flexible operation of both southern and northern diversion points, fish can be better protected.

3. Protect Fish with State-of-the-Art Fish Screens
   - New northern diversion points would be fitted with state-of-the-art fish screens to avoid and minimize the likelihood of entrapment of fish and other aquatic organisms.

4. Improve and Better Approximate Natural Flow in the Estuary
   - Reducing the frequency, duration and rate of reverse flow—by minimizing south Delta pumping and providing for a more natural east-to-west flow pattern through dual conveyance—improves conditions for fish.

5. Create New Habitat Areas
   - New flow patterns linked with habitat restoration areas create opportunities to re-establish important ecological processes associated with the interaction between land and water in a way that is beneficial to fish and that more closely resembles natural estuary function.

Frequently Asked Questions

1. Why is the Bay Delta Conservation Plan contemplating isolated conveyance?
   - Changing the design of the basic plumbing is an important part of fixing the Delta. Use of an isolated facility around the Delta would help restore the more natural east-west flow patterns that characterized the Delta estuary historically to the benefit of Delta habitat. As a major component of the BCP conservation strategy, as well as a covered activity, improved Delta conveyance is expected to help stabilize and gradually recover legally protected species and also ease current operational constraints on essential water supplies from the Delta.

2. Will the implementation of the BDCP increase salinity in the Delta?
   - Preliminary analyses suggest that operating a new north Delta diversion in combination with the existing pumps in the south Delta, in addition to strategically located habitat restoration, will help maintain existing agricultural and drinking water quality in the Delta. Additional modeling of water flows and quality for fish, in-Delta use, and water export is likely to be completed as part of the draft plan. Impacts on water quality also will be assessed as part of the BCP’s environmental review and in water rights and water quality deliberations and proceedings before the State Water Resources Control Board and in other regulatory processes.

3. Why can’t the pumps be turned off for good?
   - The state and federal water projects provide 25 million Californians with some portion of their water for homes, businesses, agriculture, and recreation. There is no way simply to turn the pumps off because there is no realistic way to replace all of the water that would be lost without severe economic damage to the state. Water purveyors across the state are implementing improvements in conservation and advancing potential innovations like desalination. A more environmentally sustainable and reliable way to move water through the Delta must be found.

4. Why can’t the existing pumps be fitted with better fish screens? Wouldn’t that protect the fish?
   - Even if better screens were used at the pumps in the southern part of the Delta, the pumping still would pull fish toward a dead-end in the south. Nutrients and organic matter still would be pulled in as well. The resultant water flows that disrupt natural processes and species life cycles would still occur. While fish screens might save some fish at the pumps, in the long run their habitat would still be significantly impaired.

5. If dual conveyance doesn’t create any new water, why spend the money on it?
   - BDCP is considering dual conveyance because, from a water reliability perspective, it would protect against threats to levees posed by earthquakes and long-term sea level rise in the Delta. Dual conveyance also provides critical capacity and flexibility to change flow patterns in a way that is needed to restore basic ecological functions in the Delta such as production of food for fish, spawning and rearing habitat, and flows that support safe fish migration. Water users who rely on the State Water Project and federal Central Valley Project would pay for dual conveyance facilities.

Note: An environmental review will evaluate the environmental effects of the BDCP including various alternatives to the BCP.
The water operations and flow measures developed to date by the BDCP Steering Committee will be used for modeling purposes, which will provide data upon which to develop proposed water operations rules, including adaptive ranges, that will be identified in the Public Draft plan. The descriptions of the rules below represent elements of a potential framework for which the BDCP participants will conduct further study and evaluations before including them in the draft plan.

Fremont Weir/Yolo Bypass

Alters seasonal floodplain inundation by enabling more spills of water into Yolo Bypass under specified conditions, including limited duration and depth.

Objectives: (1) increasing spawning and rearing habitat for spilttai1 and rearing habitat for salmonids, (2) providing alternate migration corridor to the mainstream Sacramento River, and (3) increasing effectiveness of habitat and food transport in Cache Slough.

North Delta Diversion Bypass Flows

Establish minimum river flows with a fraction of flows above that minimum that would be available for export depending on the season. Ensures that Sacramento River flows are always greater than export diversions and that flows support the habitat needs of covered fish and the ecological needs of the Delta as a whole.

What is new or changed: Five new intakes create a new point of diversion in the north Delta; operated in conjunction with south Delta diversions to maintain water quality and meet biological needs of all covered fish species.

Delta Cross Channel Gate Operations

Openly close the gates seasonally when fish are present.

What is new or changed: Currently the Delta Cross Channel gates are closed between February and late May for fishery protection. Operations under the BDCP that are currently being investigated include closing the Delta Cross Channel gates during ten months of the year with open gates in July and August to help ensure suitable Delta water quality.

South Delta Flows

Investigate a range of outflow options that would enable, maintain, or increase the minimum outflows currently required under the project water right permits.

What is new or changed: Significantly higher flows in Old and Middle Rivers, reducing effect of reverse flows and much lower exports from the South Delta using the through-Delta system.

Objectives: (1) improve the survival of covered fish by reducing the risk of entrainment losses at the south Delta exports, (2) increase survival of juvenile salmon and steelhead by reducing delays during migration and straining off course, (3) improve downstream transport of larval and juvenile fish, and (4) improve the production of food resources within the Delta and Suisun Bay.

Rio Vista Flows

The State Water Board requirements plus additional minimum seasonal flow requirements.

Objectives: maintain flows for migrating salmonids and smelt.

Inflow

Potential new approach to ensuring a specified freshwater inflow to the Delta using the cumulative Eight River Index — the sum of the runoff from the eight major rivers of the Sacramento and San Joaquin valleys that helps determine the duration of the fish and wildlife salinity and flow standard at Chopin Island or Port Chicago during February through June.

Potential objectives: (1) maintain hydrologic synchrony (seasonal and daily increases and decreases in river flows) between the mainstream Sacramento River and its tributaries, (2) maintain environmental cues used by fish and other aquatic species to signal spawning, migration, and other population responses and behaviors, and (3) increase the survival and growth of covered fish inhabiting the river and estuary.

Outflow

Combination of existing State Water Resources Control Board regulations, relaxed restrictions on Roe Island trigger, and additional restrictions on fall outflows.

What is new or changed: Patterns of outflow do not change significantly. Outflow is expected to be similar to current regulations, relaxed restrictions on Roe Island trigger, and additional outflow restrictions on fall outflows.

Objectives: (1) Provide sufficient outflow to maintain Delta flushing, (2) prevent fish from moving through transverse delta and Delta outfalls, (3) reduce algal accumulations, and maintain suitable salinity. This operation would ensure that not all diversions occur from the north Delta during the summer. The summer exports would include opening the Delta Cross Channel gates to increase the flow of freshwater from the Sacramento River into the Delta.

What is new or changed: Currently the Delta Cross Channel gates are closed between February and late May for fishery protection. Operations under the BDCP that are currently being investigated include closing the Delta Cross Channel gates during ten months of the year with open gates in July and August to help ensure suitable Delta water quality.

Objectives: (1) reduce transport of outmigrating Sacramento River fish into central Delta, (2) maintain flows between Sacramento River, and (3) provide sufficient Sacramento River flow into interior Delta when water quality is suitable for municipal and industrial use and species are present.

Operations for Delta Water Quality and Circulation

Establish maximum limit on south Delta pumping during July through September.

What is new or changed: The south Delta export pumps would be used during the summer months to maintain circulation of water within central and south Delta channels to avoid stagnant conditions, reduce algal accumulations, and maintain suitable salinity. This operation would ensure that not all diversions occur from the north Delta during the summer. The summer exports would include opening the Delta Cross Channel gates to increase the flow of freshwater from the Sacramento River into the Delta.

Objectives: (1) maintain a minimum level of pumping from the south Delta during summer to provide limited flushing for general water quality conditions (reduce stagnation and prolonged water residence times), (2) municipal and industrial, and agricultural salinity improvements, and (3) allowing operational flexibility during other periods to operate either north or south diversions based on real-time assessments of benefits to fish and water quality.

For more information, contact Karla Nemeth at 916-651-7587.
Water Operations Conservation Measures

WOCMN12: Operate South Delta diversions to maintain sufficient Old and Middle River Flows during the near-term implementation period for environmental benefits.

WOCMN5: Operate the Delta Cross Channel Gates during the near-term for environmental benefits.

WOCMN6: Maintain sufficient Rio Vista flows for environmental benefits during the near-term implementation period.

WOCMN8: Install and operate gates at Old River and Connection Slough (“Two Gates”) to reduce the transport of covered species into the interior Delta and improve water quality in the south and central Delta.

WOCMN9: Maintain sufficient Delta outflows during the near-term implementation period for environmental benefits.

WOCMN14: Maintain agricultural, municipal, and industrial water quality requirements during the near-term implementation period.

WOCMN11: Operate the Montezuma Slough Salinity Control Gate during the near-term implementation period for environmental benefits.

WOCML1: Construct a new water diversion facility in the north Delta with multiple intakes and fish screens and an isolated conveyance facility and preferentially operate the facility while maintaining sufficient bypass flows for covered fish species.

WOCML12: Operate South Delta diversions to maintain sufficient Old and Middle River Flows during the long-term implementation period for environmental benefits.

WOCML2: Modify the Fremont Weir and Yolo Bypass and operate the Fremont Weir to provide for a higher frequency and duration of inundation of the Yolo Bypass.

WOCML5: Operate the Delta Cross Channel gates during the long-term for environmental benefits.

WOCML6: Maintain sufficient Rio Vista flows for environmental benefits during the long-term implementation period.

WOCML9: Maintain sufficient Delta outflows during the long-term implementation period for environmental benefits.

WOCML#: Operate the Dual Conveyance Facilities to Maintain Delta Water Quality and Protect Covered Fish Species.
Water Operations Conservation Measures (continued)

WOCML14: Maintain in-Delta agricultural, municipal, and industrial water quality requirements during the long-term implementation period.

Physical Habitat Conservation Measures

HRCM 16. Restore 65,000 acres of freshwater and brackish tidal marsh within Restoration Opportunity Areas.

HRCM4: Restore at least 5,000 acres freshwater tidal marsh within the Cache Slough Complex ROA.

HRCM5: Restore at least 1,500 acres of freshwater tidal marsh within the Cosumnes/Mokelumne ROA.

HRCM6: Restore at least 2,100 acres of tidal marsh within the West Delta ROA.

HRCM7: Restore at least 5,000 acres of tidal marsh within the South Delta ROA.

HRCM8: Restore at least 1,400 acres tidal marsh within the East Delta ROA.

HRCM9: Restore at least 7,000 acres of brackish tidal marsh within the Suisun Marsh Restoration Opportunity Area.

HRCM##. Enhance channel margin habitats along at least 20 linear miles of Delta channel banks.

HRCM15: Enhance channel margin habitats along non-Project levees in the Delta to improve habitat conditions for covered fish species.

HRCM12: Enhance channel margin habitats along Steamboat and Sutter Sloughs to improve habitat conditions for covered fish species.

HRCM13: Enhance channel margin habitats along the San Joaquin River between Vernalis and Mossdale to improve habitat conditions for covered fish species.

HRCM11/HRCM14: Restore at least 5,000 acres of riparian forest and scrub in Restoration Opportunity Areas.

HRCM1/HRCM2: Restore seasonally inundated floodplain habitat along the San Joaquin River downstream of Vernalis.

HRCM3: Restore seasonally inundated floodplain habitat along Old and/or Middle Rivers.

HRCM17: Assess the feasibility of a new flood bypass east of the Sacramento Deep Water Ship Channel to restore seasonally inundated floodplain habitat.
Other Stressors Conservation Measures

OSCM1: Determine whether ammonia and ammonium have adverse direct and/or indirect effects on BDCP covered species and, if adverse effects are found, assist wastewater treatment plants in identifying funding sources to reduce the load of ammonia and ammonium in effluent discharges.

OSCM2: Determine whether endocrine disrupting compounds have adverse direct and/or indirect effects on BDCP covered species and, if adverse effects are found, assist wastewater treatment plants in identifying funding sources to reduce the load of endocrine disrupting compounds in effluent discharges.

OSCM3: Reduce the load of methyl mercury entering Delta waterways.

OSCM4: Reduce the load of agricultural pesticides and herbicides entering Delta waterways from in-Delta sources that are believed to be toxic to covered fish species and the food organisms upon which they depend.

OSCM5: Reduce the loads of toxic contaminants in stormwater and urban runoff by working with existing efforts in the Delta.

OSCM7: Maintain dissolved oxygen levels above levels that impair covered fish species in the Stockton Deep Water Ship Channel during periods when covered fish species are present.

OSCM8: Improve the quality of water discharged from managed seasonal wetlands into Suisun Bay and Delta waterways to prevent dissolved oxygen sags.

OSCM10: Reduce the risk for future introductions of non-native aquatic organisms from recreational watercraft.

OSCM11: Improve the rapid detection of and rapid response to new non-native species introductions into Delta waterways.

OSCM13: Remove non-native submerged and floating aquatic vegetation from Delta waterways.

OSCM14: Increase the harvest of non-native predatory fish to decrease their abundance.

OSCM16: Reduce illegal harvest of Chinook salmon, Central Valley steelhead, green sturgeon, and white sturgeon in the Delta.

OSCM17: Reduce adverse effects of harvest on Sacramento splittail abundance.

OSCM18: Develop and implement hatchery and genetic management plans to minimize the potential for genetic and ecological impacts of hatchery reared salmonids on wild salmonid stocks.

OSCM19: Reduce losses of wild stocks of Chinook salmon to commercial fishing and recreational fishing through a mark-select fishery.
Other Stressors Conservation Measures (continued)

OSCM20: Establish new and expand existing conservation propagation programs for delta and longfin smelt.

OSCM21: Screen, remove, relocate, consolidate, modify and/or alter timing of non-project diversions to reduce entrainment of covered fish species in the Delta.

OSCM24: Reduce the effects of predators on covered fish species by conducting localized predator control of high predator density locations.

OSCM25: Improve the survival of outmigrating juvenile salmonids by using non-physical barriers to re-direct them away from channels in which survival is lower.
SUMMARY OF PUBLIC COMMENTS AT MARCH 2009
DELTA-AREA COMMUNITY INFORMATION MEETINGS
FOR THE BAY DELTA CONSERVATION PLAN

I. Comments organized by BDCP Chapter 3 (Conservation Strategy) sub-headers
II. Comments related to Chapter 3 but not the subject of September 2009 Workshop breakout groups
III. Comments relevant to the BDCP but not directly tied to Chapter 3

3.3 Biological Goals and Objectives
- The BDCP should be clear on whether it will engage in an ESA Section 10 HCP, or a Section 4 recovery plan.

3.4 Conservation Measures
3.4.1 Water Operations Conservation Measures
General
- The BDCP should evaluate how the conservation measures are beneficial in the long term for California’s economy and should prioritize what contributes to the long-term livelihood of Californians.
- Solutions to fix downstream problems need to take into account the entire watershed and must be designed correctly downstream and then incorporated into upstream conditions and solutions.
- The BDCP should explain how future operations will be modeled and regulated, if current operations are contrary to permit conditions and not enforced by the State Water Resources Control Board.
- It was indicated that taking water out of one area and putting it in another area will not help the Delta. A more viable BDCP would include self-sufficiency for those regions that need the water.
- The BDCP should ensure long-term planning for water availability and reliability statewide. The state should be putting resources and efforts toward regional self-sufficiency and the most flexible, resilient systems possible in order to confront unknown future conditions.
- The BDCP should explain what happens to land that is no longer needed for conservation, and at what point the process “stops,” especially in terms of species conservation measures.
- Conservation measures inside of the Delta should involve willing sellers and participants.

Water Quantity/Sources/Origins/Storage/Delivery
- The BDCP should perform studies on how much water is available in the system order to inform a minimum amount of exports.
- The BDCP should address how much surplus water is available for exports, what the economic and environmental consequences of various reduced or no export scenarios are, and how diversion points for junior water rights can be legally changed if they will harm senior water rights users.
- State of California policy makers should consider the fact that using agricultural water for fish restoration is not a viable solution due to the long-term drought situation.
- Within the context of global warming, the BDCP should closely outline where the water would originate way and additional storage opportunities, as abundant flows could occur only two months out of the year.
- The BDCP needs to provide a realistic evaluation of its effects on water supply reliability from levee failure due to earthquakes.
- It was indicated that the earthquake scenario in the BDCP overstates the risk of levee failure due to earthquakes.
• The BDCP should have alternate plans in place to account for drought cycles.
• The BDCP should ensure that flows to carry out the conservation efforts are available.
• The BDCP should consider the availability of water in its planning and how the State Water Project allocations to Southern California would impact the BDCP.
• The BDCP should consider increased reservoir storage needs and the need for two or three new major reservoirs in Northern California.
• Desalination was frequently mentioned as an alternative means of securing water supplies that the BDCP should factor into the planning process.
• There are concerns that the BDCP would lead to significantly worsening of water quality negating any positive ecological values.
• It was indicated that the BDCP minimizes the engineering requirements to achieve and maintain water quality in the Delta.
• The BDCP should develop a method to coordinate water conservation and exports.
• It was requested that the BDCP take into consideration reduction in water deliveries from the Trinity River. The BDCP should provide 50,000 acre feet back to the Trinity River to fulfill legal obligations.
• The BDCP should return to Chico and other areas in Northern California after these scoping meetings are complete, in order to receive input from local stakeholders throughout the entire BDCP process, continually engage Northern California stakeholders in the BDCP, provide continued BDCP updates, and speak to stakeholders about water origination. There are many stakeholders in Chico who wish to provide continued input into the BDCP.
• It was indicated that the BDCP should consider water supply to California Indian tribes.

**Water Movement/Flow**

• The technical details of how much water will be put into the bypass need to be carefully considered, especially in terms of cost.
• The BDCP should show Sacramento River flow at various times of the year and also show the flow that is required for fish bypasses (in cubic feet per second/cfs) in order to inform water needs.
• The BDCP should address the technical basis for proposing the flood bypass downstream from Sacramento and how this could be accomplished more efficiently by using the existing deep water ship channel.
• It was indicated that creating a new bypass in flood areas within the existing Reclamation districts will constrain or eliminate existing water management through water elevation changes and under-seepage. This will require redesign and operational changes throughout the region, causing expensive infrastructure modifications and loss of agricultural use.
• It was indicated that the current river systems in California are under stress and the BDCP plans for water conveyance would stress them further.
• There were concerns regarding the proposed modification to Fremont Weir to provide higher frequency and duration of inundation, especially in regards to seepage water coming from the bypass levees and affecting adjoining farmlands.
• The BDCP should address impacts to Knights Landing Ridge Cut 5 Canal, which flows into the Yolo Bypass just below Fremont Weir. Additional water in the bypass may have significant impacts on the water flows in the canal and cause backups.
• The BDCP should consider the fact that increased sedimentation will occur in the bypass with additional water flows, and that sediment flushes might be an option to address that.
• The BDCP should consider existing water conveyance routes.
• The BDCP needs to consider how salt water intrusion will impact the fresh water areas and how flows can be improved without saltwater intrusion.
• The BDCP should consider the impact of the Sacramento municipal intake that takes water from the Delta.
• It was indicated that the BDCP minimizes the considerable engineering required to establish new flood routing and manage tidal influence wetlands.
- It was indicated that the BDCP should consider moving the bypass and the anticipated project activities farther south into the deep water channel, to avoid affecting homes and businesses in the Clarksburg area.
- The BDCP should consider and address global warming, and analyze how global warming will affect the Sacramento River.

**Water Quality**
- The BDCP should consider how water quality will be impacted and maintained and whether there will be sea water intrusion.
- It was indicated that increasing flows and pumping operations in certain areas also increases salinity, which conflicts with BDCP objectives. The BDCP should clearly indicate how these salinity issues will be addressed.
- It was indicated that diversion of low salinity Sacramento River water in the Delta would increase salinity in the Delta, reducing agricultural yields.
- It was indicated that the BDCP should incorporate ways to make urban areas more reliant on their own resources, to include desalination, water recycling and reclamation.
- It was indicated that desalination is resource-intensive, and uses a significant amount of oil.
- The BDCP should determine how to integrate “Phase 8” (a complex legal arrangement to extract more water out of Northern California from willing sellers to meet water quality standards in the Delta) into the planning.
- It was indicated that if the BDCP assumes that it can use 15,000 cfs of the export pumps at the state and federal projects that is not currently permitted under federal law, it should clarify how it will meet water quality obligations in order to increase exports.
- The BDCP is missing a plan that describes how freshwater will be maintained to protect the 10% of the remaining wetlands in California.
- The BDCP should consider changes to the Clarksburg region hydrology and the effects on water quality in the Delta and north Delta that would result from the proposed conveyance and habitat restoration projects.
- The BDCP should make water quality guarantees for the Suisun Marsh, specifically in the spring and the fall.
- The BDCP should consider recommending that Southern California use desalination instead of using water from Northern California.
- The BDCP should recommend building new storage, in addition to building new wastewater treatment plants in Southern California that use reverse osmosis. This process can be used to desalinate brackish ground water, which causes little conflict with marine mammals and has been shown to be less energy intensive than water conveyance.
- Natural desalination was suggested as a way to utilize the water’s own weight and natural gradient in the sea to desalinate water with less energy than is currently required. With a pipeline or horizontal pipeline to the shore, the natural flow of water from the plant at sea to the shore allows water savings and prevents water diversions. It was indicated that using the power of the oceans and rivers to desalinate the water should be considered in the BDCP.
- It was indicated that there is no scientific evidence that proves that the discharge from the Sacramento Regional County Sanitation District wastewater plant is having a detrimental effect in the Delta.

3.4.2 Physical Habitat Conservation Measures

**General Strategies**
- The Plan should consider how water taken from the Delta would help with species restoration and should seek to prove that the species that use the Delta can be managed sustainably in light of the drought –– before water transfers are considered. 
- The BDCP needs to clearly indicate how conservation strategies to enhance the existing habitats will be implemented. It was indicated that the BDCP wrongly seeks to protect species and the environment while having minimum amount of exports, rather than seeking to develop habitat conservation plans to protect fisheries or the environment.
• It was indicated that the BDCP appears to be a system of salt water marshes where there used to be fresh water marshes. The agricultural land is not being conserved, but instead, will be inundated by salt water.

• The BDCP is lacking in details about quantifiable biological targets, objectives, consequences, sizing, location, capacity, and operational protocols. These assurances and safeguards are critical, considering the difficulty associated with enforcing existing standards.

• It was indicated that it is clear that habitat restoration for enhancement of endangered species habitat is not the BDCP’s priority; rather, it is about mitigation of diversion of water for export from the Delta.

• It was indicated that proposed BDCP measures for altered hydrodynamics, water movement in interaction with canal beds and banks do not provide the proper nutrients, water temperatures, water volume or water depth to support fish species survival.

• The BDCP should address how much water the estuary requires to maintain ecosystem integrity.

• It was indicated that creating a deep water ship channel bypass should be considered as a potential restoration measure (i.e. creating a flood bypass on the Eastside, similar to the Westside of the deep water ship channel).

• It was indicated that water taken should be delivered for species restoration and not for use Southern Californians.

• It was indicated that new habitat cannot replace identified existing critical habitat.

• The intrusion of saltwater relative to habitat should be addressed in the BDCP.

• The BDCP should be clear on how conservation zones are delineated and how they become legally binding.

• The BDCP should clearly delineate the conservation strategies that are outside the scope of the legal conservation planning boundaries.

• Conservation outside of the planning areas should be considered.

**Fish Viability/Protection**

• The BDCP should outline how the fish would survive in the proposed system, as well as identify who will maintain the fish nets.

• It was indicated that the fish screens at the pumps should be updated based on new technology and to account for differences in velocity. The current fish screens do not work well.

• The BDCP should explain the term “positive flow screen” for fish screens and explain how they operate within the proposed Plan.

• The BDCP should consider how to balance individual wetland sub-tidal fish habitat against seasonal wetlands that support other native, terrestrial, and migratory species.

• The BDCP should address ways to improve the survival of salmon and steelhead from the Mokelumne River. It was indicated that under the current situation, the run cannot be self sustained, which has become more important recently with the change of CDFG policies on egg transfers.

• The BDCP should consider structural fixes to keep salmon steelhead from the Mokelumne River from being entrained in the conveyance corridor that would include the South Fork of the Mokelumne River, middle river to the Victorian Canal.

**Suisin Marsh**

• The BDCP should be clear on why the entire Suisun Marsh will be restored and what actions led to that decision.

• It should be clearly stated that there are other options beyond tidal restoration for the Suisun Marsh plan, such as maintaining the existing wetlands, resource values and functions.

• It was indicated that the legacy of landowner conservation in the Suisun Marsh due has presented BDCP the opportunity to have a legacy of water fowl conservationists that preserve and protect those lands.
3.4.3 Other Stressors Conservation Measures

**Toxics/contaminants**
- The BDCP should consider the impact sewer treatment plants that are putting excessive and detrimental amounts of ammonia into the system and that affect the Delta food chain. The BDCP technical people should work with CALFED and the Regional Water Quality Control Board to determine if there are impacts.
- The BDCP should consider the impacts of introducing ammonia in the east side tributaries, in addition to potential endocrine disrupters and limiting factors for fish and wildlife on the east side of the Delta that might be new to the ecosystem.
- The BDCP should consider other means of conveying water, as to avoid toxic water (bio-solids, lead, pharmaceuticals, road toxins) from entering from the sewers and killing fish. The BDCP should outline a process to restore those areas contaminated by toxins and contaminants.
- The BDCP should coordinate with water districts’ “take” systems, sewage treatment plants, ammonia releases, and water depletion that lead to concentration of contaminants.

**Invasive species**
- The BDCP should consider invasive species as one of the greatest ecological problems in the Delta and identify the likely impacts of invasive species on the BDCP. For example, it was indicated that a large number of saltwater species are entering the Delta because of lower water quality.
- It was indicated that salt is entering the Delta because of the water pumps, which brings in new species and new considerations to the Delta, which the BDCP needs to evaluate.
- It was indicated that creating a water refuge in the Clarksburg area would affect the public and the entire Sacramento Valley by creating a West Nile Virus incubator.
- The current West Nile mosquito eradication process kills the phantom midge, which is the main food source of the smelt.
- West Nile Virus increases in the Delta are expected to have significant impacts on native birds such as the Yellow-billed Magpie.
**Note:** The following public comments are not in the three topics areas identified for September 2009 Conservation Strategies workshop breakout group discussions, but they fall in other areas covered in Chapter 3.

### 3.4.4 Avoidance and Minimization Measures for Covered Wildlife and Plant Species
- The BDCP should clearly outline conservation strategies with regards to how the resource agencies plan to balance different species that are affected by the pumps, such as water fowl, neotropic migrant shore birds, and resident mammals.
- The BDCP should thoroughly analyze the Plan’s effect on terrestrial species, especially Swainson’s Hawk, which will be affected by the changes in the bypass and the surrounding lands. Some of the mitigation areas for Swainson’s Hawk could be destroyed by additional water in the bypass.
- The BDCP should acknowledge that bird and wildlife species are as important as fish species. The long term consequences of lack of water for those species in the Delta should be taken in account.
- The impacts on rare terrestrial plants such as San Joaquin Shats scale need to be addressed, in addition to how the BDCP would avoid fragmentation or possible extirpation of these species.
- The BDCP should quantify the amount of rare wetland habitat that would be jeopardized by the proposed canal construction and how many acres of this land have been surveyed.
- Converting fresh water habitat to brackish water habitat will have negative influences on the ecosystems of the upper Delta, leaving this area as one of the last reservoirs of many species, such as listed turtles and birds.
- It was indicated that the unique soil, high water table and climate conditions in the Clarksburg area enabled growers to produce high quality Dichondra and Safflower seeds on a consistent basis.
- It was indicated that there should not be such a narrow target on species, especially the Delta smelt. Other species that exist in the Delta should be considered such as hawks, egrets, loons, owls, otters, beavers, and ducks.

### 3.6 Adaptive Management Program
- The BDCP should clarify whether the HCP will have a typical assurances clause with take permits, or if there will be assurances and adapted management plans. It was indicated that assurances don’t allow for adaptive management.
- The BDCP should describe how decisions will be made about the effectiveness of adaptive management measures. If adaptive management measures are found to not work and are abandoned, the BDCP should describe the process for making those determinations.
- The BDCP should clarify the assurances that will be made to private landowners in terms of adaptive management, and describe the process for returning land to landowners.
- The BDCP should discuss how new science would affect adaptive management, and the impetus for modifying modify water conveyances in response to new information about the ecosystem.
- The BDCP should outline how it will balance habitat needs and agricultural needs.
- It was indicated that it is difficult to evaluate conservation measures, agricultural impacts, and other anticipated operational impacts when dealing with a take permit.
- The BDCP should clarify whether permits may be issued at the same time as conservation measures and other activities so that the effectiveness of conservation measures may be evaluated.
- The BDCP should describe what would trigger changes in the Plan over time, and how the agencies would work with landowners to notify them of plan changes.
March 2009 public comments relevant to the BDCP but not directly tied to Chapter 3

**General comments**
- As the State of California is facing economic challenges, the BDCP should evaluate the “worth” of a Delta Smelt or a Longfin Smelt, the economics around the issue, and from where the funding for the program will originate.
- It was indicated that water transfers should be delinked from the BDCP, as the health of the watershed should be the primary focus of the BDCP.
- The Delta Vision Process and the BDCP should further acknowledge Northern California’s contribution to the watershed.
- The BDCP should avoid negatively casting farming as the culprit of poor water use.
- The State of California should refocus its priorities in order to determine whether it prioritizes environmental issues over people and the economy.
- It was indicated that the BDCP appears to have a preconceived objective to build a peripheral canal.
- The BDCP should outline a plan for how the Delta would be protected in an emergency situation, especially if a peripheral canal will be put in place and there’s a drought emergency, and if water quality standards can be overruled.

**Process**
- The BDCP needs to transparently describe in detail for the public the actual planning and implementation actions.
- It was requested that during the BDCP development, staff consider the individual comments made during the scoping meetings.
- The scoping meeting was not properly advertised and suffered from a lack of public notification.
- Many scoping meeting participants were aware of the meeting only through word of mouth, and the one-day ad in the Enterprise Record was not viewed by enough people.
- It was suggested that advertisements be placed in the Red Bluff, Corning, Orland, Willows and/or Maxwell papers.
- The previous BDCP meeting in September was scheduled in the middle of the day, at the peak of harvest, so farmer turnout was poor.
- Since the public will seek to understand the different operational scenarios and propositions for the BDCP, the BDCP should inform stakeholders of how their water rights and contracts will be impacted by incidental take permits, anticipated exports and fish recovery efforts.
- The public should be informed of what assurances will be made to the areas of upstream origin.
- The BDCP should meet with Northern California municipal supervisors.
- The BDCP staff agency representatives should attend the scoping meetings in order to hear local issues.
- The BDCP Steering Committee should work with a tribal trust responsibility committee in order to provide tribes with a meaningful mechanism with which to participate in the process, as the federal government has a trust obligation to deliver to tribes.
- It was indicated that the BDCP is too premature of a process to inform substantive comments.
- It was indicated that the BDCP’s time schedule is too accelerated, especially in light of the anticipated hydraulic modifications on the estuary.
- It was indicated that holding scoping sessions before there is a BDCP to which to respond is not the right order of actions. It would be preferable to have a plan in order to evaluate the environmental review in detail.
- Once the BDCP measures are clearly defined, the BDCP should come back to scoping meetings for additional comments, since it is currently only in the investigation stage.
- The BDCP Steering Committee or the governing structure of the BDCP should allow stakeholders from the Delta to have a voice directly in the process, outside of meetings.
- The BDCP should choose the conveyance routes with the very least impact by speaking with stakeholders and local landowners.
**Governance/Jurisdiction/Funding**

- Since the physical measures in the BDCP will result in multiple impacts to the integrity of the present Delta, the levee system, the hydrology, the economic environment, the existing habitat, the social fabric, the BDCP should outline who is responsible for overseeing and maintaining the integrity of the Delta, throughout and after the measures have been implemented.
- The BDCP needs to have an accountability structure, a matrix to measure the results, and concurrence between various agencies, in order to ensure that decisions are made and accounted for properly.
- The BDCP should outline how the plan was authorized.
- The BDCP should be clear about who is on the Steering Committee, including the names of people representing the agencies. It should include representatives from Delta environmental or agricultural interests on the BDCP Steering Committee. The BDCP Steering Committee should not exclude representatives of Delta communities.
- It was indicated that the BDCP has become narrower in its application, more focused in its funding, and more directed by the interests who have a stake outside of the Delta rather than those involving the people in the Delta.
- It was indicated that habitat conflicts between agencies need to be addressed in the BDCP and coordination among agencies and projects is necessary. (Examples: Sacramento River Bank Protection Project and all Sacramento River projects, San Joaquin River Restoration Program)
- It was indicated that the BDCP should outline how it fits in with the many similar processes that are underway, as there is conflict among the government agencies, and each restoration’s data.
- It was requested that the BDCP be consistent with local county planning departments.
- The BDCP should explain its implications on the Williamson Act lands and the USDA’s environmental quality assurance programs, and identify the lands that will be affected.
- It was indicated that water exports should be governed under existing surplus water law.
- The BDCP should address the issue of public trust (e.g. the public putting trust in the BDCP without extensive facts of figures), and the fact that the public is weary of new programs. People don’t trust DWR based on past experiences.
- The public expects DWR to share information with them in order to garner their trust and for them to have faith in government programs.
- The BDCP is missing a plan that describes how the Central Valley Flood Protection Board levee protection and abandonment process will be incorporated, and how the X2 will be maintained.
- It was indicated that the BDCP should consider which agency or jurisdiction would be responsible for mitigating increases in salinity on private property.
- The BDCP should clarify that the costs associated with the Plan will be covered by water contractors, and should explain the reimbursement agreement in place now between the contractors and DWR.
- The funding mechanisms and the specific costs for the BDCP need to be clear.
- The BDCP should address the difference in cost between using the ship channel and creating a new bypass.
- The BDCP should account for long-term financing of the project, even when water shortages increase, as water users will not be able to fund the plan if they do not have water available.
- It was indicated that the Solano County tax base is far behind that of other counties and that if Solano County becomes a “mitigation sink,” tax revenue will be lost. The BDCP should address how tax revenues may be impacted and how the tax base will be compensated for.
- The BDCP should consider how to resolve actual program costs and revenue sources, and from where revenue will originate.
- The various cost models to support one conservation measure over another should be outlined in the BDCP, and the models should incorporate socioeconomic and agricultural factors.
- It was indicated that since the BDCP is funded by state monies, it could be interpreted as biased.
Community/individual impacts

- The BDCP needs to clearly prioritize people over fish.
- It was indicated that the BDCP should acknowledge that the Delta is more than an ecosystem problem, but it affects millions of people. Proposals for fixing the Delta are going to have impacts on people’s lives. There should be a third co-equal goal to the Delta vision, which is sustaining the intrinsic values of the Delta as a place.
- It was indicated that the BDCP should address the social issues around engineering and water management, as it is not just a conveyance problem to maximize water transfer.
- It was indicated that landowner land losses need to be accounted for in the BDCP.
- The BDCP should tie the sustainability and the viability of these communities to the ongoing operations of the facility that is finally selected.
- It was indicated that the BDCP should consider humans as a species that needs to be protected.
- It was indicated that although the BDCP’s scope is far reaching, those impacted are those who live in the areas where water is being taken.
- Private property rights need to be acknowledged in the BDCP.
- It was indicated that improving habitat for Delta smelt and other listed species could create new legal issues for the community, further reducing landowner’s ability to exercise property rights. The BDCP should address how the community could be protected from the consequences of this likely impact.
- The BDCP should seek to mitigate impacts to property owners as a result of water quality modifications.
- The BDCP should work to avoid flooding the farmlands, since they are a unique area of agriculture and beauty.
- The Delta Protection Act designated the Clarksburg area’s primary use for agriculture, recreation, and tourism. It is hoped that the conservation measured will follow those precepts.
- It was indicated that the draft BDCP contains core elements that would result in inundation of the Yolo Bypass to the point where agriculture could be lost.
- There are concerns that the BDCP will destroy the region of the Delta and its growers’ way of life.
- The wine industry in and around Clarksburg is a large contributing factor to the California economy. Canal diversions would severely undercut the wine industry and its ability to grow.
- The BDCP needs to indentify the impacts to local business and landowners as there are many businesses which will be gravely affected by the destruction of area farming, for example, equipment sales, repair companies, fuel delivery companies, seed companies, and other ventures.
- It was indicated that loss of farmland in the Delta will have ripple effects with agriculture equipment, suppliers, truck dealers and other stakeholders, which impacts employment opportunities. The Plan should describe the models used to analyze the losses.
- It was indicated that the documented and undocumented impacts of the BDCP will directly and indirectly affect the people of Clarksburg, but the people of Clarksburg who will carry the burdens of the Plan will see none of the benefits.
- It was indicated that local counties and communities receive no benefit out of the pumps in the South Delta, as their pumps are in the Cache Slough that supplies Solano and Napa County.
- North Delta area) can survive and improve with the water needs of other areas.
- The BDCP Steering Committee should ensure the community that the full impacts of the restoration actions will be completely addressed.
Recreational boating/fishing
- Recreational fishing is in decline and the BDCP should ensure that fishing opportunities are maintained and enhanced.
- The BDCP should seek to sustain accessibility for recreational boats in the Delta water as modification and improvements are proposed.
- If barriers are placed across waterways, the BDCP should coordinate with stakeholders to ensure that boat locks can be installed and operated, at no cost to boaters, at times when the boating public wants to travel through the Delta (especially Three-Mile Slough and Bacon Island).
- The BDCP should ensure that accommodations for recreational boats be provided and operated at no expense to boaters, especially along the alignment of existing eastern Delta waterways.
- It was indicated that the proposed plan would ruin the small harbors on Bethel Island.
- The BDCP should evaluate the concept of regional self-sufficiency.
- The BDCP should address how it will handle the non-native fish species in the Delta that create viable incomes for local residents.

Canal
- The BDCP should address how many years would the canal have water flowing through it and what its annual capacity would be.
- The BDCP needs to outline how many pumping stations will be needed for the canal.
- The BDCP should explain how it would propose a solution to the ship traffic via the canal if a peripheral canal was built.

Permitting
- The BDCP should address who will be the lead for the permitting process and who will sign the permits, and address any potential conflicts of interest between those two activities.
- The BDCP should clarify whether permits may be issued at the same time as conservation measures and other activities, so that the effectiveness of conservation measures may be evaluated.
- The BDCP should address how the permitting process fits in with the overall conservation process.

Relationship to Delta Vision
- Stakeholders are encouraged that the BDCP process is highlighted in the Delta Vision Process, that the BDCP is used as a way to expedite a scientific means of habitat restoration for the Delta, and that the BDCP approach is more beneficial than a political or court-ordered solution to the problem.
- The Delta Vision Process is inconsistent in its definition of the statutory Delta area and the entire surrounding watershed.
- Although the Delta Vision Process goal is different from the entire watershed's goal, the Delta Planning Process should be carried out concurrently with the BDCP in order to account for the entire watershed.
- The maps included in the BDCP should also be included in the Delta Vision process and other related efforts.

Levee operations
- The BDCP should describe levee maintenance and management.
- It was indicated that the BDCP should incorporate long-term commitments to levees maintenance, especially in the Suisun Marsh area.
- The BDCP should address where the estimated 10 million yards of levee material for levee construction will originate, how it will be moved and whether it will be placed on the western conveyance project.
The environmental review process to support the Bay Delta Conservation Plan (BDCP) is being conducted by five state and federal agencies. The California Environmental Quality Act (CEQA) lead developing the Environmental Impact Report (EIR) is the Department of Water Resources (DWR). The federal National Environmental Policy Act (NEPA) leads developing the Environmental Impact Statement (EIS) are the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. The California Department of Fish and Game is a responsible agency on the EIR.

Agencies developing the EIR/EIS will evaluate ecosystem restoration and water conveyance alternatives identified by the BDCP. The agencies will also evaluate additional alternatives identified through the environmental review process under CEQA and NEPA. In addition, DWR formed the Delta Habitat Conservation and Conveyance Program (DHCCP) to provide engineering and real estate services in support of the environmental review process.

The BDCP was formed in 2006 and is comprised of a 26-member Steering Committee including federal and state agencies, environmental organizations, fishery agencies, water agencies, and other organizations.

The goal of the BDCP is to restore habitat within the Delta in a way that reliably delivers water throughout California. The BDCP is being developed under the federal Endangered Species Act (ESA) and the California Natural Community Conservation Planning Act (NCCPA), and is undergoing extensive environmental analysis.

Goals of the BDCP
- Identify conservation strategies to improve the overall ecological health of the Delta.
- Identify ecologically friendly ways to move fresh water through and around the Delta.
- Identify actions to address other stressors.
- Provide a framework to implement the plan over time.

Goals of the Environmental Review Process
- Analyze BDCP-proposed actions and alternatives to those actions through a formal EIR/EIS process.
- Analyze options and consider areas of concern presented by the public during the EIR/EIS process.
- Develop options for habitat restoration and water conveyance.
The Conceptual Options

The Delta supports California’s water system by conveying water to 25 million people throughout the state. Proposals to convey water around the Delta are aimed at avoiding sensitive habitat while reliably delivering water.

The conceptual water conveyance options currently under consideration have been previously identified in a variety of planning documents. Potential habitat restoration opportunities are also being considered. These and other options will be evaluated through the EIR/EIS process.

Intakes
A number of possible intake locations are being considered in the area from south Sacramento to Hood. River intakes with pumping plants transfer water to conveyance facilities on the East, West, All-Tunnel, Through-Delta, or Dual Conveyance options.

* Not all intake options are shown.

All-Tunnel
- 5 intake facilities with fish screens along the Sacramento River
- 6 pump stations
- 38 miles of canal
- 17-mile tunnel (3 bores, 27 feet inside diameter)
- Forebay with 620 acres of water surface area

Through-Delta
- 2 intake facilities with fish screens along the Sacramento River
- 12 miles of canal
- 66 miles of levee retrofit/setback levees
- 9 to 11 operable barriers
- Victoria Canal modification
- New fish salvage facility
- 2 tunnels (4.5 miles total in length)

Dual Conveyance
The Dual Conveyance option will combine portions of the East, West, or All-Tunnel alignments with some components of the Through-Delta alignment.

Intake Lines
Tunnels
West Option
All-Tunnel Option
Through-Delta Option
East Option

All features shown on this map are conceptual and subject to change.
Habitat Restoration

The Delta is home to hundreds of aquatic and terrestrial species, a number of which are threatened or endangered and whose natural habitats have significantly changed over time. The BDCP is developing habitat restoration plans aimed at improving habitat quality to assist in the recovery of threatened or endangered fish and terrestrial species identified by the Plan. The EIR/EIS will evaluate potential habitat restoration options identified by the BDCP, as well as alternatives to those options, as part of the environmental review process.

Potential habitat restoration options currently under consideration include:

- Floodplain restoration aimed at inundating suitable floodplain habitat during winter and spring for fish-rearing habitat and food base production.
- Intertidal marsh restoration aimed at improving brackish and freshwater intertidal marshes.
- Channel margin habitat restoration aimed at returning suitable sites along the water side of levees to a more natural condition for increased food production, rearing habitat, improved water temperature conditions, and movement corridors for fish.
- Riparian habitat restoration aimed at establishing native vegetation near channels, rivers, and streams.
- Shallow sub-tidal habitat restoration aimed at improving shallow tidal habitats.

Aquatic species to be addressed by the BDCP and evaluated in the EIR/EIS process include:

- Delta smelt
- Longfin smelt
- Winter-run Chinook salmon
- Spring-run Chinook salmon
- Fall-run and late fall-run Chinook salmon
- Central Valley steelhead
- Green sturgeon
- White sturgeon
- Sacramento splittail
- Pacific and river lamprey

The BDCP and the EIR/EIS process will also address terrestrial or land-based species. More information on habitat restoration opportunity areas will be available by late 2009.
The proposed water conveyance options are at the conceptual design stage and could include an open canal, levee retrofitting and setback levees, tunneling, or a combination of these options. The water conveyance options are proposed to match the current pumping capacity of up to 15,000 cubic feet per second. The conveyance facility will be designed to resist damage from earthquakes and flooding, while providing the capability to move water at maximum flows during wet seasons.

**Tunnels**

Tunnels may consist of as many as three separate 27-foot-wide (inside diameter) tunnels constructed side-by-side up to 150 feet below ground.

Additional tunnel options are being considered, including a two-tunnel design (33 feet inside diameter) for an All-Tunnel water conveyance option.

**Intake Options**

Three intake options are being considered, including an on-bank cylindrical screen option, an on-bank screen option, and an in-river screen option. Additional details on the intake options will be available by late 2009.

---

**BDCP Environmental Review Process**

For additional information, contact: Rebecca Nicholas  
(916) 651-2966  
michola@water.ca.gov