

Alternative 10



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B-001181

# Alternative 10 - Summary

## Small East-Side Conveyance

### Emphasis

This alternative emphasizes implementing a comprehensive combination of habitat restoration, system reliability improvements, and water supply augmentation actions to achieve high levels of improvement for all program objectives. Reduce diversion effects on fish by constructing a small, isolated conveyance facility from the Sacramento River to the export pumps.

### Distinguishing Features

This alternative is intended to provide a **moderate** level of resource improvement and conflict resolution.

| Physical/Structural   | Operational/Management  | Institutional/Policy   |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Small (5,000 to 7,000 cfs) isolated conveyance facility around eastern and southeastern edges of Delta to serve multiple users</li> <li>• New screened diversion on Sacramento River</li> <li>• Moderate level of levee improvements to protect Delta functions</li> <li>• Moderate level of habitat restoration in the Delta and the Sacramento and San Joaquin Rivers</li> <li>• Combined 1-2 MAF of new storage to augment water supply for ecosystem, water quality, and water users</li> <li>• Screens on moderate and high priority diversions</li> <li>• New screened intake at Italian Slough</li> <li>• Bypass facility at Old River</li> </ul> | <ul style="list-style-type: none"> <li>• Real-time monitoring to reduce fish entrainment</li> <li>• Obtain 100,000 AF of San Joaquin River water and manage for environmental purposes</li> <li>• Expanded water conservation and reclamation programs</li> </ul> | <ul style="list-style-type: none"> <li>• Funded levee improvements, emergency management plan, and landside buffer zones to reduce system vulnerability</li> </ul> |

### Benefits

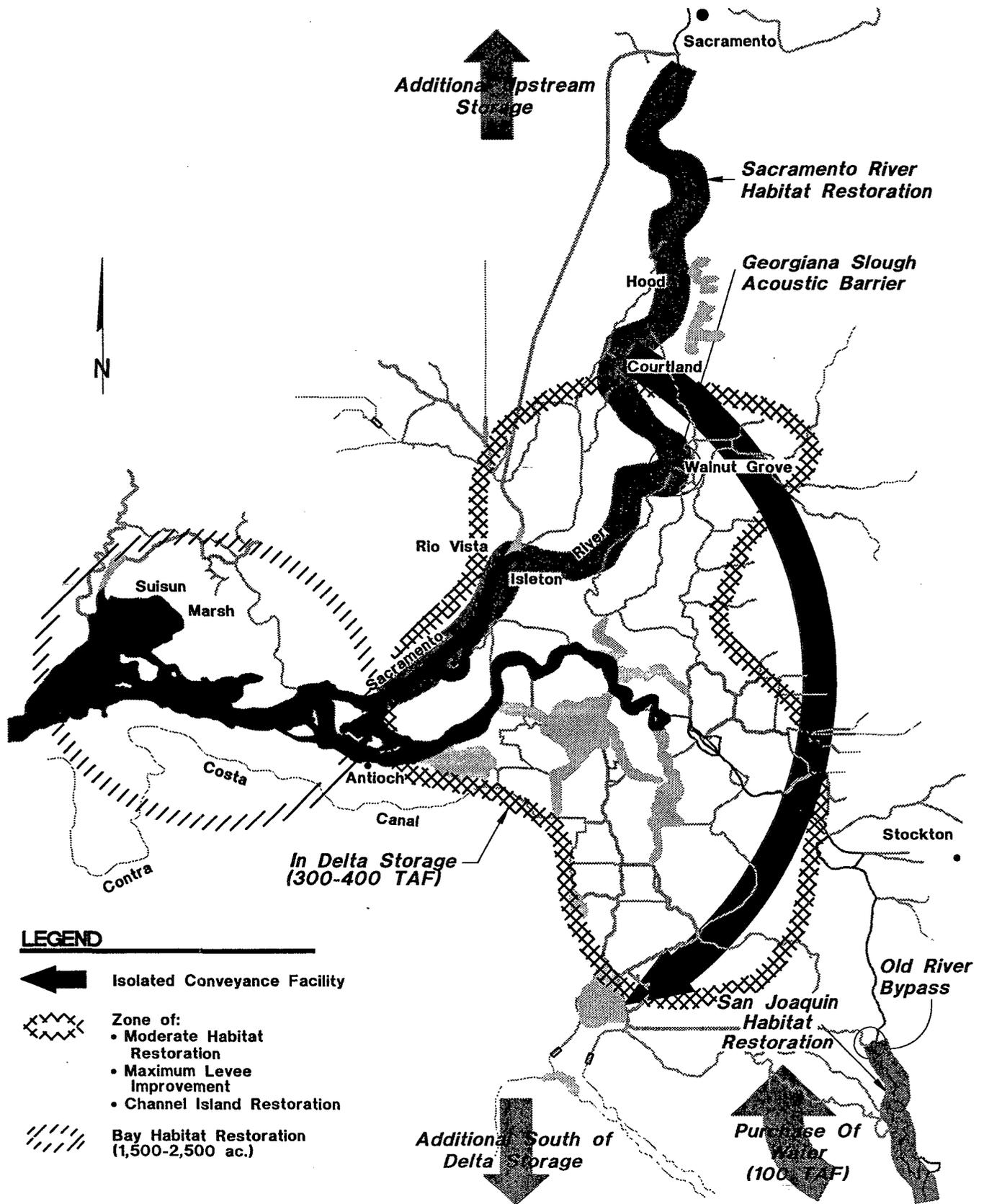
- Habitat restoration, increased environmental flows, and reduced impacts of diversions improve ecosystem health and restore fishery
- Moderately increases water supply predictability and reliability
- Significant decreases in vulnerability of Delta levees to failure
- Improved water quality through source control and isolation of flows

### Constraints and Concerns

- Screening and real-time monitoring may not be sufficient to avoid entrainment effects at new diversions
- New diversion is in critical smelt habitat
- Some Delta islands remain vulnerable
- Larvae of some important fish species remain vulnerable to entrainment
- Some continued diversions of export supplies and resulting entrainment in south Delta

# Small East-side Conveyance

## Alternative 10



**LEGEND**

-  Isolated Conveyance Facility
-  Zone of:
  - Moderate Habitat Restoration
  - Maximum Levee Improvement
  - Channel Island Restoration
-  Bay Habitat Restoration (1,500-2,500 ac.)

## Alternative 10

# Small East-Side Conveyance

### Overview

This alternative will reduce fish entrainment in the Delta and upstream by restructuring the Delta system. Some diversions will be moved to a less environmentally sensitive location, reducing fish losses. Moderate habitat restoration will further increase fish populations.

*diversions are  
relocated to  
protect fish*

Currently, the SWP and CVP pumps create reverse flows that move fish into the South Delta, where many of the fish are entrained. Under the ESA, limits are set on fish entrainment (take limits) to avoid jeopardizing fish populations. When these limits are approached, pumping is temporarily reduced or stopped. The constant threat of a temporary pumping reduction or shut-down makes it difficult for water users to predict or rely on their supply. This alternative moves a portion of the SWP and CVP diversions to the Sacramento River. This will reduce reverse flows and cause fewer fish to be drawn into the South Delta and killed. Also, moderate levels of habitat restoration and fish screening will improve overall ecosystem health and further increase fish populations. Consequently, larger fish populations will make ESA take limits less of a factor in water supply operations, not only for the SWP and CVP, but for all water users in the Sacramento and San Joaquin Basins.

*protecting fish  
improves water  
supply reliability*

A new partial SWP and CVP diversion will be located on the Sacramento River near Hood. The new diversion will be equipped with state of the art fish screens and real time monitoring to minimize entrainment of fish. A new canal, which will be isolated from the Delta, will be constructed to convey water from the new diversion to the existing Banks and Tracy Pumping Plants. The isolated facility will be sized to provide water service to users in Sacramento County, San Joaquin County and the Bay Area as well as the CVP and SWP. While the new diversion location will improve water quality for most users, certain Bay Area users may find this water quality unacceptable.

*small diversion  
moved to the  
Sacramento River  
and connected to  
the existing  
pumps with a new  
canal*

This alternative will restore habitat along the Sacramento River downstream of Sacramento and restore channel features to improve survival of anadromous fish on the San Joaquin River. Moderate habitat restoration in the Delta will include improvement of shallow riverine and riparian habitats to improve conditions for anadromous fish. Levee improvements will incorporate habitat restoration. Shallow tidal habitat will be developed in Suisun Marsh to benefit migrating salmon and provide spawning and rearing areas for Delta Smelt.

*moderate habitat  
restoration in the  
Delta and in  
Suisun Marsh*

Water storage facilities with a total capacity of 1 to 2 million acre-feet will be constructed upstream of the Delta, in the Delta, and south of the Delta to increase the capacity to capture, store, and use flows for environmental and water supply benefits. Increased upstream water storage can be used to provide pulse flows to transport fish through the Delta. Water storage totaling 300,000 to 400,000 acre-feet will be constructed on Delta islands to better manage water transfers, capture

*new storage  
upstream, in the  
Delta, and  
downstream*

unregulated flows, and minimize storage constraints on exports. This storage also allows water to be provided during critical periods while avoiding adverse effects on fish. Water will be purchased from San Joaquin River users to improve transport of fish through the Delta and improve south Delta water quality.

By creating a new diversion point for a portion of Delta exports, this alternative allows better management of diversions, reducing fish entrainment and improving water quality. Additional water storage throughout the system further maximizes flexibility to meet a variety of water needs, providing a moderate level of benefits for water supply, water quality, and environmental needs.

## Physical and Structural Features

### Habitat Restoration

| Activities   | Benefits  |
|--|---|
| <ul style="list-style-type: none"> <li>Restore riparian, shaded riverine, and shallow water habitat along the <b>Sacramento River channel</b> between Sacramento and Collinsville</li> </ul>                         | <ul style="list-style-type: none"> <li>Provides substantial improvement in aquatic habitat as well as improvements in water supply reliability and water quality</li> <li>Increases survival and spawning success of anadromous and Delta native fish</li> </ul>      |
| <ul style="list-style-type: none"> <li>Restore <b>Delta and floodway corridor</b> shallow water, riparian, terrestrial, and tidal wetland habitat</li> </ul>   | <ul style="list-style-type: none"> <li>Provides spawning areas for Delta native fish and forage areas and escape cover for juvenile salmon, Delta smelt, splittail, and other species. Provides improvements in water supply reliability and water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>Restore approximately 75 to 125 miles of shallow water, riverine, and riparian habitat along <b>Delta levees</b></li> </ul>   | <ul style="list-style-type: none"> <li>Provides spawning areas for Delta native fish and forage areas and escape cover for juvenile salmon, Delta smelt, splittail, and other species. Provides improvements in water supply reliability and water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>Restore and protect <b>channel islands</b> from erosion and enhance habitat</li> </ul>  | <ul style="list-style-type: none"> <li>Provides habitat for aquatic and terrestrial plant and animal species</li> <li>Improves water quality</li> </ul>   |
| <ul style="list-style-type: none"> <li>Restore about 1,500 to 2,500 acres of tidal wetlands in <b>Suisun Bay</b></li> </ul>  | <ul style="list-style-type: none"> <li>Provides wet year spawning habitat for Delta smelt, rearing areas for salmon, and wildlife habitat (e.g. canvasback and redhead ducks)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Restore riverine channel features in the <b>San Joaquin River</b> above the Delta to lower water temperature and to protect young fish from predation and straying</li> </ul> | <ul style="list-style-type: none"> <li>Improves fish survival</li> </ul>  |

**Considerations**

- **Sacramento River Channels** – Feasible and cost-effective habitat restoration implemented between Sacramento and Collinsville.
- **Delta** – Candidate areas for shallow water habitat restoration include Prospect Island, Liberty Island, Little Holland Tract, Hastings Tract, Yolo Bypass, and the southeast Delta. Candidates for Delta levee habitat restoration include Twitchell Island along Threemile Slough and Sevenmile Slough, Georgiana Slough, and the North and South Forks of the Mokelumne River.
- **Floodway Corridors** – Habitat restoration must not impair capacity of floodways.
- **Suisun Bay** – Convert diked wetlands or create tidal wetlands with dredge spoils between Collinsville and Carquinez Strait.
- **San Joaquin River** – Confine wide, shallow channels and isolate in-channel gravel quarry areas. May not be self-sustaining.

**Water Transport**

| Activities   | Benefits   |
|--|--|
| <ul style="list-style-type: none"> <li>• Construct a new, screened diversion point for a portion of export supplies on the Sacramento River upstream of the Delta</li> <li>• Construct a new isolated conveyance facility to transport water from the new diversion point to existing pumping plants in the south Delta</li> </ul> | <ul style="list-style-type: none"> <li>• Reduces entrainment of fish during export diversion</li> <li>• Improves water quality for export users</li> <li>• Offers the capability to provide water supplies to users in the region immediately east of the Delta</li> <li>• Improves water supply reliability by adding flexibility of a second diversion point upstream of most Delta native fish habitat</li> </ul> |
| <ul style="list-style-type: none"> <li>• Increase east-side channel flood flow capacity</li> </ul>   | <ul style="list-style-type: none"> <li>• Increases flood flow routing capability and flexibility</li> <li>• May improve shaded riverine aquatic habitat</li> </ul>   |

**Considerations**

- Diversion and conveyance facility sized to transport up to 7,000 cfs for export.
- Diversion at a location upstream of the Delta such as near Hood or Freeport sited to minimize intrusion into native fish habitat.
- Use best available screening technology and real-time monitoring to minimize fisheries impacts.
- Siphons will carry conveyance facility beneath existing Delta channels to avoid environmental, water quality, and flood conveyance impacts.
- East side channel improvements would focus on Mokelumne River but also include channels such as Cosumnes river and Deer Creek.
- Investigate the feasibility of multiple smaller diversion sites to improve operational flexibility and the ability to respond to fishery concerns.
- Investigate the feasibility of using a buried aqueduct.

### Water Storage

| Activities  | Benefits  |
|---|---|
| <ul style="list-style-type: none"> <li>• Convert one or more <b>Delta islands</b> to a <b>water storage facility</b> with approximately 300,000–400,000 AF capacity</li> <li>• Construct <b>screened diversions</b> to divert flows into storage</li> </ul>   | <ul style="list-style-type: none"> <li>• Provides additional diversion flexibility</li> <li>• Improves fish transport through the Delta</li> <li>• Could significantly improve response time (compared to Folsom or Shasta Reservoirs) for releasing water for improved management of X2</li> <li>• Reduces entrainment of fish</li> <li>• Reduces frequency and duration of export curtailments</li> </ul> |
| <ul style="list-style-type: none"> <li>• Construct <b>new upstream storage</b> with approximately 500,000 to 1 million AF capacity</li> <li>• Construct <b>new downstream storage</b> with approximately 250,000 - 750,000 AF capacity</li> </ul>   | <ul style="list-style-type: none"> <li>• Provides additional storage and operational flexibility for supply, quality, and the environment</li> <li>• Allows diversions to be reduced during times of greater environmental sensitivity, and increased at times of reduced environmental sensitivity</li> </ul>  |
| Considerations  |   |
| <ul style="list-style-type: none"> <li>• Locate new environmentally dedicated in-Delta reservoir near export pumps on one or more islands such as Bacon, Mandeville, or Victoria</li> <li>• Divert water during November, December, and January; release water from March to July as needed. With real-time monitoring, divert when species of concern are not present and release water to move fish or release for diversion.</li> <li>• Environmentally dedicated water in upstream storage allows reduction in diversions during critical fishery periods.</li> <li>• Creation of wide riparian and shallow water habitat corridor around perimeter of Delta island storage would provide additional fish and wildlife benefits.</li> </ul> |   |

### Fish Protection and Transport

| Activities  | Benefits  |
|---|---|
| <ul style="list-style-type: none"> <li>• Construct a <b>San Joaquin River bypass</b> at the head of Old River</li> </ul>  | <ul style="list-style-type: none"> <li>• Encourages outmigrating fish to stay in San Joaquin River</li> <li>• Allows for managing flows down Old River</li> </ul> |
| <ul style="list-style-type: none"> <li>• Install <b>fish screens</b> on moderate and high priority diversions in the Delta, rivers, and tributaries</li> </ul>                          | <ul style="list-style-type: none"> <li>• Reduces entrainment of fish</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Construct new screened State Water Project intake at <b>Italian Slough</b></li> </ul>  | <ul style="list-style-type: none"> <li>• Avoids fish predation and entrainment in Clifton Court Forebay when diversion rates are low</li> </ul>                   |
| <ul style="list-style-type: none"> <li>• Improve drainage in <b>floodway corridors</b></li> </ul>   | <ul style="list-style-type: none"> <li>• Reduces fish stranding</li> </ul>  |
| Considerations  |   |
| <ul style="list-style-type: none"> <li>• Select diversions for screening according to criteria including size of intake, location, peril to fish, and screening feasibility.</li> </ul> |   |

### Flood Protection and Levee Stabilization

| Activities   | Benefits  |
|--|---|
| <ul style="list-style-type: none"> <li>• Provide a moderate level of protection and stabilization of Delta levees through levee maintenance and stabilization actions</li> </ul>   | <ul style="list-style-type: none"> <li>• Manages vulnerability of Delta land use and infrastructure</li> <li>• Manages vulnerability of Delta water supply to salinity intrusion</li> <li>• Manages vulnerability of Delta ecosystem functions</li> <li>• Provides opportunities for habitat restoration</li> </ul> |
| <ul style="list-style-type: none"> <li>• Improve flood conveyance capacity of Delta channels through channel maintenance and improvements</li> </ul>   | <ul style="list-style-type: none"> <li>• Manages vulnerability of Delta functions</li> <li>• Improves flood conveyance</li> <li>• Provides opportunities for habitat restoration</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Increase Delta east-side channel flood flow capacity</li> </ul>   | <ul style="list-style-type: none"> <li>• Provides for more efficient movement of water for flood control</li> <li>• Provides for more efficient movement of water to the south Delta diversions during high flow periods</li> </ul>   |
| Considerations   |   |
| <ul style="list-style-type: none"> <li>• Provide flood protection equivalent to Army Corps of Engineers PL 99 standard for these islands:                             <ul style="list-style-type: none"> <li>All critical western islands such as Jersey Island.</li> <li>Islands with important regional infrastructure (e.g., Highway 12) such as Terminous Island</li> <li>Islands with both valuable habitat and important regional infrastructure (e.g., transmission lines) such as Lower Roberts Island.</li> </ul> </li> <li>• Upgrade all other Delta levees to meet at least the Hazard Mitigation Plan (HMP) standards.</li> <li>• Integrate protection and stabilization of levees with Delta habitat restoration activities.</li> <li>• Provide stable funding mechanism for ongoing levee and habitat monitoring, maintenance, and management.</li> <li>• Improvements to channels include dredging for sediment removal in channels with restricted flood capacity.</li> <li>• Integrate channel improvements with levee improvements.</li> </ul> |   |

### Operational and Management Features

#### Water Supply Management

| Activities   | Benefits  |
|--|---|
| <ul style="list-style-type: none"> <li>• Encourage groundwater banking programs</li> </ul>   | <ul style="list-style-type: none"> <li>• Provides additional dry year water supply flexibility</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Expand water conservation best management practices (BMPs) and implement and expand efficient water management practices (EWMPs)</li> </ul> | <ul style="list-style-type: none"> <li>• Reduces demand for water from the Delta</li> </ul>                                   |
| <ul style="list-style-type: none"> <li>• Implement feasible reclamation and reuse projects for urban and agricultural supplies.</li> </ul>   | <ul style="list-style-type: none"> <li>• Reduces demand for water from the Delta</li> <li>• Improves water quality</li> </ul> |

| Activities   | Benefits  |
|--|---|
| <ul style="list-style-type: none"> <li>• Create a coordinated CALFED program to expedite and expand the use of <b>water transfers</b> to meet water needs during droughts</li> </ul>   | <ul style="list-style-type: none"> <li>• Increases flexibility of water supplies during dry years</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Integrate <b>land retirement and land fallowing</b> programs with existing programs such as CVPIA and San Joaquin Drainage Program</li> </ul>   | <ul style="list-style-type: none"> <li>• Reduces demand for water from the Delta</li> <li>• Improves water quality</li> <li>• Increases flexibility of water supplies during dry years</li> </ul> |
| Considerations   |   |
| <ul style="list-style-type: none"> <li>• Possible state and federal cosponsorship for conservation and reclamation programs.</li> <li>• Institutional needs to improve water transfers.</li> <li>• Land retirement and land fallowing will focus on marginal agricultural lands and lands from willing sellers.</li> </ul> |   |

**Water Diversion Management**

| Activities   | Benefits   |
|--|--|
| <ul style="list-style-type: none"> <li>• Acquire about <b>100,000 AF of water</b> from willing sellers in the <b>San Joaquin basin</b></li> </ul>  | <ul style="list-style-type: none"> <li>• Transports fish through San Joaquin River and Delta</li> <li>• Improves water quality</li> <li>• Improves management flexibility for diversions to reduce fish loss</li> </ul>      |
| <ul style="list-style-type: none"> <li>• <b>Improve CVP and SWP operations</b> through predation control, coordinating operations, and improving fish salvaging and handling</li> </ul>  | <ul style="list-style-type: none"> <li>• Reduces fish losses</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Improve <b>real-time monitoring</b> of locations of fish species of special concern and modify water diversions to avoid fish entrainment</li> </ul>  | <ul style="list-style-type: none"> <li>• Provides an additional tool to help reduce entrainment of special-concern species</li> <li>• Improves flexibility to divert water during critical fish migration periods</li> </ul> |
| <ul style="list-style-type: none"> <li>• Evaluate, improve, and install <b>behavioral barriers</b> for anadromous fish</li> </ul>  | <ul style="list-style-type: none"> <li>• Diverts anadromous fish from areas of potential entrainment and predation</li> <li>• Allows for continued water diversions at current locations</li> </ul>                          |
| Considerations   |  |
| <ul style="list-style-type: none"> <li>• Can use San Joaquin environmental water for pulse flows to aid fish transport or dilute poor quality flows</li> <li>• Coordinate use of San Joaquin environmental water with the operation of new Delta storage to improve timing of diversions</li> <li>• Evaluate continued use of an acoustic barrier at the mouth of Georgiana Slough.</li> <li>• Evaluate behavioral barriers for Delta Cross Channel and Threemile Slough.</li> </ul> |  |

**Fisheries Management**

| Activities  | Benefits  |
|---|---|
| <ul style="list-style-type: none"> <li>• Mark salmon produced in hatcheries</li> </ul>  | <ul style="list-style-type: none"> <li>• Facilitates selective catch of hatchery salmon by commercial and recreational fisheries</li> </ul>       |
| <ul style="list-style-type: none"> <li>• Conduct net-pen rearing of striped bass to supplant natural production</li> </ul>  | <ul style="list-style-type: none"> <li>• Maintains recreational fishery</li> <li>• Reduces operational constraints on water diversions</li> </ul> |
| <b>Considerations</b>   |   |
| <ul style="list-style-type: none"> <li>• Actions are intended to maintain recreational and commercial fisheries as well as enhance native salmon stocks.</li> <li>• Need to assess impact of incidental mortality on native (unmarked) fish.</li> </ul> |   |

**Water Quality Management**

| Activities   | Benefits   |
|--|--|
| <ul style="list-style-type: none"> <li>• Control agricultural, urban, and industrial discharges through retention and timed release</li> </ul>   | <ul style="list-style-type: none"> <li>• Improves Delta water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>• Increase enforcement of source control regulations for agricultural drainage and implement farming best management practices for water quality</li> </ul>   | <ul style="list-style-type: none"> <li>• Improves Delta water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>• Increase enforcement of source control regulations for urban and industrial runoff and implement best management practices for water quality</li> </ul>   | <ul style="list-style-type: none"> <li>• Improves Delta water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>• Integrate existing land retirement and fallowing programs for agricultural lands with drainage problems</li> </ul>  | <ul style="list-style-type: none"> <li>• Improves Delta water quality</li> </ul> |
| <ul style="list-style-type: none"> <li>• Integrate existing and support appropriate on-site mine drainage remediation measures to the maximum extent feasible</li> </ul>   | <ul style="list-style-type: none"> <li>• Improves Delta water quality</li> </ul> |
| <b>Considerations</b>  |  |
| <ul style="list-style-type: none"> <li>• Implement discharge retention through cost-effective actions such as constructed wetlands, underground pipe storage, temporary storage ponds, or reuse.</li> <li>• Time agricultural and industrial releases coincide with higher instream flows.</li> <li>• Identify priority pollutant sources such as Iron Mountain Mine and west-side San Joaquin agricultural lands.</li> <li>• Provide regulatory and institutional incentives for implementation of remediation measures.</li> </ul> |  |

# Institutional and Policy Features

## Habitat Programs

| Activities  | Benefits   |
|---|--|
| <ul style="list-style-type: none"> <li>Integrate recommended <b>habitat restoration actions from other programs</b>, including CVPIA and the Anadromous Fish Restoration Program</li> </ul>       | <ul style="list-style-type: none"> <li>Provides additional habitat restoration</li> </ul>  |
| <ul style="list-style-type: none"> <li>Establish programs to <b>preserve agricultural land uses</b> that provide valuable habitat functions</li> </ul>  | <ul style="list-style-type: none"> <li>Protects existing habitats</li> </ul>   |
| <ul style="list-style-type: none"> <li>Establish a CALFED team to coordinate and <b>expedite habitat restoration permits</b></li> </ul>   | <ul style="list-style-type: none"> <li>Accelerates acquiring permits for environmental restoration projects and other CALFED projects</li> </ul> |
| <ul style="list-style-type: none"> <li>Establish and fund a management program and rapid response team to <b>manage introduced species</b></li> </ul>   | <ul style="list-style-type: none"> <li>Protects existing valuable species and habitat</li> </ul>   |
| <ul style="list-style-type: none"> <li>Establish a program to identify and use <b>clean dredge materials</b> from the Delta for habitat restoration and levee maintenance in the Delta</li> </ul> | <ul style="list-style-type: none"> <li>Provides materials for habitat and levee improvements</li> </ul>  |
| <ul style="list-style-type: none"> <li>Encourage farmers and levee maintenance districts to <b>leave habitat areas undisturbed</b> by working with resource agencies</li> </ul>                   | <ul style="list-style-type: none"> <li>Protects existing habitats</li> <li>Increases flexibility in maintenance programs</li> </ul>              |
| <b>Considerations</b>   |  |
| <ul style="list-style-type: none"> <li>Coordinate activities to avoid duplication.</li> </ul>   |  |

## Water Quality Standards

| Activities  | Benefits   |
|---|--|
| <ul style="list-style-type: none"> <li>Reevaluate Delta <b>export/inflow ratios</b> during triennial reviews as habitat effectiveness is realized</li> </ul>  | <ul style="list-style-type: none"> <li>Allows for higher level of water transfer as fishery populations improve</li> </ul> |
| <b>Considerations</b>   |  |
| <ul style="list-style-type: none"> <li>Monitor to verify effectiveness of habitat and entrainment reduction programs. Develop an adaptive management program to modify habitat restoration and export/inflow ratios in response to improved sustainability of important species.</li> </ul> |  |

## Management of System Vulnerability

| Activities  | Benefits  |
|---|---|
| <ul style="list-style-type: none"> <li>Establish and fund an <b>emergency levee management plan</b> to respond to levee failures</li> </ul>   | <ul style="list-style-type: none"> <li>Provides resources to protect Delta functions through proactive and preventative measures</li> </ul>   |
| <ul style="list-style-type: none"> <li>Establish <b>landside buffer zones</b> adjacent to levees on islands with deep peat soils</li> </ul>   | <ul style="list-style-type: none"> <li>Provides increase in stability of Delta levees and reliability of Delta functions by reducing subsidence adjacent to levees</li> <li>Could be used to provide habitat benefit</li> </ul> |
| Considerations  |   |
| <ul style="list-style-type: none"> <li>Determine extent and cost effectiveness of levee management programs and buffer zones.</li> <li>Buffer strip approximately 100 to 150 yards wide dedicated to shallow wetlands.</li> </ul> |   |

## Preliminary Assessment

### Benefits

- Habitat restoration, increased environmental flows, and reduced impacts of diversions improve ecosystem health and restore fishery
- Increases water availability for all users of Delta water
- Funded levee management program significantly decreases vulnerability of Delta functions to failure
- Improves water quality through source controls and increased flows for dilution

### Constraints and Concerns

- Some Delta islands remain vulnerable to flooding
- New diversion in critical habitat (Delta smelt on the Sacramento River)
- Screening and real time monitoring may not be as effective as necessary
- Continued diversions of export supplies and resulting entrainment in south Delta, although at a reduced amount
- Best available screening technology and real-time monitoring may not be as effective as necessary to avoid entrainment effects at diversion locations.