Central Valley Flood System Conservation Strategy

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Yolo Bypass and downtown Sacramento, Jan 1986
Flood System Infrastructure at Risk
• ½ of urban levees do not meet current standards
• 3/5 of nonurban levee have high potential for failure
• ½ of evaluated channels cannot pass design flows

Ecosystem at Risk
• 4% of historic riparian forest remains
• Lack of habitat quantity, quality, & connectivity
• 180 fish passage barriers
• 53 T&E or sensitive species

Valley at Risk
• Among lowest level of flood protection
• 1 million people residing in floodplains
• $70 Billion in assets at risk
• $3 Billion damages -major flood events

Yolo Bypass and downtown Sacramento, Jan 1986
Goals

- Improve flood risk management
- Improve operations and maintenance
- Promote ecosystem functions
- Promote multi-benefit projects
- Improve institutional support
Refining the investment approach

Basin-wide Feasibility Studies

Conservation Strategy

Regional Flood Management Plans

2012 / 2013 / 2014 / 2015 / 2016 / 2017
Why a Conservation Strategy?

- Improve project delivery with environmental benefits
- Broaden collaboration, public support & funding
- Meet CVFPP goals and CVFP Act objectives
- Improve environmental conditions & trends
Geographic Scope

Conservation Planning Areas of the Conservation Strategy
Conservation Strategy Contents

- Ecological conditions, problems, and opportunities
- Conservation goals & objectives
- Data and technical environmental analysis (species needs, important areas)
- Management approaches to support flood improvements
  - regional permitting
  - advance mitigation projects
  - multiple-benefit flood management actions
  - fish passage improvement
  - vegetation management
  - agricultural stewardship
  - habitat tracking
Conservation Strategy Goals

CVFPP Supporting Goals

- Improve Operations and Maintenance
- Promote Ecosystem Functions
- Improve Institutional Support
- Promote Multi-Benefit Projects

Specific Goals:

- Improve dynamic hydrologic (flow) and geomorphic processes (processes)
- Increase and improve habitat quantity, diversity, quality, and connectivity (habitat)
- Contribute to the recovery and sustainability of native species (species)
- Reduce stressors that negatively affect at-risk species (stressors)
Goals and Objectives

Ecological Goals and Targeted Ecosystem Processes, Habitats, Species, and Stressors

<table>
<thead>
<tr>
<th>Ecological Goal</th>
<th>Targeted Ecosystem Process, Habitat, Species, or Stressor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ecosystem processes.</strong> Improve and enhance dynamic hydrologic and geomorphic processes.</td>
<td>Floodplain inundation</td>
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<tr>
<td></td>
<td>Riverine geomorphic processes</td>
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<tr>
<td><strong>Habitats.</strong> Increase and improve quantity, diversity, quality, and connectivity of riverine aquatic and floodplain habitats.</td>
<td>Shaded Riverine Aquatic cover</td>
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<td></td>
<td>Riparian</td>
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<td>Marsh (and other wetlands)</td>
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<td></td>
<td>Floodplain agriculture</td>
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</tbody>
</table>

Key: CVFPP = Central Valley Flood Protection Plan, SRA = shaded riverine aquatic.
### Ecological Goals and Targeted Ecosystem Processes, Habitats, Species, and Stressors - continued

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<td><strong>Species.</strong> Contribute to the recovery and sustainability of native species populations and overall biotic community diversity.</td>
<td>Targeted species</td>
</tr>
<tr>
<td><strong>Stressors.</strong> Reduce stressors related to the development, operation, and maintenance of the flood risk management system that negatively affect at-risk species.</td>
<td>Revetment, Levees¹, Fish passage barriers, Invasive plants</td>
</tr>
</tbody>
</table>

**Key:** CVFPP = Central Valley Flood Protection Plan, SRA = shaded riverine aquatic.

**Note:**

¹ In particular, levees are a stressor where located within river meander zones or if their design does not provide sufficient capacity for riparian habitat throughout the floodway.
Conservation Implementation

- Regulatory efficiency and effectiveness
  - Regional permits for many projects for many years
  - Advance mitigation projects
- Levee vegetation and invasive species management
- Environmental science and planning information
Agricultural Stewardship

- Agricultural is critical to State’s economy and provides habitat for a variety of species
- Conservation Strategy includes:
  - Examples of agricultural stewardship efforts
  - How DWR can work with agricultural interests to support agricultural sustainability and stewardship
- Agricultural Land Stewardship (ALS) planning document and tool box of ALS Strategies
Yolo Bypass - Related Programs & Plans

Related Efforts

- DSC Delta Plan
- CDFW Ecosystem Restoration Program
- DWR & USBR BDCP CM2
- CDFW YB Wildlife Area Land Management Plan
- DWR & CVFPB CVFP Plan
- USBR & DWR 2009 NMFS BiOp RPA 1.6.1 & 1.7
- DWR BWFS & Conservation Strategy
- Locally Led Regional Flood Management Plans
- County NCCP/HCPs
- USACE Common Features Project
- SAFCA, USBR, USACE, DWR Folsom Dam Aux Spillway
- SFWCA Yolo Ranch
- Private Proposals

FloodSAFE California

Public Safety, Environmental Stewardship, Economic Stability