Paradise Cut Bypass Expansion Project

Presentation to San Joaquin Area Flood Control Agency

September 19, 2019

Looking South up the San Joaquin River.
Photo by Daniel Nylen, American Rivers.
The Lower San Joaquin/South Delta is very vulnerable to flooding ...

1997 Manteca flood. Photo by Dale Kolke / California Department of Water Resources
After the 1997 flood, the Paradise Cut Expansion was proposed by local farmer Alex Hildebrand.

In 2008, the CA legislature directed DWR to evaluate the project.

In 2012, the project was recommended in the CVFPP.

In 2013, the Delta Plan identified Paradise Cut as a priority.

In 2017, the Paradise Cut Expansion became a cornerstone of the CVFPP.
Project Location and Conceptual Design

[Map showing project location and conceptual design elements, including habitat enhancements and project elements like Dredging, Breach/Remove Levee, New Levee Setback, River Islands Levee Setback, Existing Levee, New Rock Embankment, Shaded Riverine Aquatic, Restored Riparian, Enhanced Riparian, Managed Native Grassland, Seasonal Agriculture.]
Looking South up the San Joaquin River. Photo by Daniel Nylen, American Rivers.
Continued Agriculture in the Expansion Area: Infrequent, planned flooding better than...

Comparison:

Yolo Bypass inundation occurs in 2/3 of all years (~67% probability)

Paradise Cut expansion would occur 1/12 of all years (<10% probability)
Continued Agriculture in the Expansion Area:
Infrequent, planned flooding better than...
...less frequent, unplanned flooding

ISSUES:
Sand splay
Erosion
Poor Drainage
Salinity
Unpredictable

1997 unplanned levee breach on the Cosumnes River. Photo by Tom Myers.
Stage Reduction
San Joaquin River
Design Flood
(~50 year event)
Stage Reduction
San Joaquin River

1997 event
(~100 year event)
Regional Flood Stage Reduction Benefits

- 0.7' Reduction
- 1.5' Reduction
- 2.0' Reduction
- 3.0' Reduction
- 1.2' Reduction

28 Miles of Stage Reduction

Expansion Footprint

Old River

Existing Bypass

Based on 1997 flood modeling results

Maximum Water Surface Elevation

Water Surface Impact Relative to Existing Condition Baseline
Next Steps

Delta Conservancy grant awarded in May 2019
Grant term ~ 2 years starting January 2020

Focused on addressing impacts on Old River and Grant Line Canal
- Compile existing data, identify data gaps, recommend studies needed
- Develop mitigation strategy to minimize negative hydraulic impacts
- Design and implement durable local engagement structure
Next steps

• Phase 1 – conceptual planning - COMPLETE
• Phase 2 – address downstream impacts - current
• Phase 3 – easement acquisition
• Phase 4 – design, permitting, compliance
• Phase 5 – construction, monitoring
Thank You!

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