

DRAFT
DRERIP Coarse-Level Evaluation Summary:
Stone Lakes Floodplain Restoration

Highlighted Text = Evaluator comments

Evaluation Date: July 29, 2008

Coarse-Level Evaluators:

Dennis McEwan—DFG	Bill Harrell—DWR
Pete Rhoads—Met	Jim White—DFG
Dan Kratville—DFG	Tim Smith—DWR
Neil Clipperton—DFG	Pete Rawlings—SAIC
Rick Wilder—SAIC	

Action Description

Create a new flood bypass that provides approximately 4000 acres of inundated floodplain habitat west of the Sacramento River (Stone Lakes) to flood approximately 30% of years for at least 45 days during late winter to early spring.

Approach:

1. Lower 200 linear feet of levee along the Sacramento River just downstream of Freeport to an elevation of 9 feet (NAVD88). This would allow the Sacramento River to inundate the new floodplain in approximately 30% of years at a controlled discharge of at least 5,000 and up to 10,000 cfs.
2. Install an operable diversion structure to manage flows into the byass.
3. Dimension of the bypass are approximately 13 miles long, 0.5 miles wide.
4. The bypass would flow through Stone Lakes and empty into McCormack-Williamson Tract.
5. Construct a levee that connects with the Sacramento River levee in the northern part of the zone to contain inundation to the western part of the zone. Depending on its alignment, the west bank of the peripheral aqueduct could be used for this purpose.

Note: This action is submitted for coarse-level evaluation of its likely biological performance in achieving BDCP conservation objectives. This action has not yet been evaluated for its financial or institutional feasibility. 1

6. Remove levees at the south end of the bypass to provide connectivity to McCormack-Williamson Tract and the Mokelumne River.

Expected Outcomes

Pdf pg 18 (xvii), for steelhead on floodplains, documentation in CV is lacking—(Williams 2006)—Sommer et.al., may use Sutter Bypass (pg. 11), use Sutter bypass (pg 11). (pg 13, 14 is more)

1. Increased frequency and success of Sacramento splittail spawning

Mag: 3; Cert. 4 = *High Worth, Medium Risk*

2. Improved growth rate of larval and juvenile splittail and Chinook salmon (winter-, spring-, and fall-run).

Mag 3; cert 2 Chinook = *Medium Worth, High Risk*

3. Improved survival of larval and juvenile splittail and Chinook salmon (winter-, spring-, and fall-run). Survival of steelhead—if acts as a better corridor for steelhead existing channels—reduced entrainment, predation exposure.

Mag 2, Cert 1 Chinook = *Low Worth, High Risk*

4. Increased primary and secondary production available to larval and juvenile and adult splittail, potentially steelhead, and Chinook salmon (winter-, spring-, and fall-run).

Mag 3; cert 2 Chinook = *Medium Worth, High Risk*

5. Increased export of primary and secondary production to the Delta ecosystem available to delta smelt, longfin smelt, sturgeon, splittail, and fry and juvenile salmonids in the Delta.

Mag 2, Cert 2 = *Medium Worth, High Risk*

Additional Positive Outcomes

1. Possible benefits to juvenile sturgeon if get on floodplains (Zoltan)—Pg 20 green sturgeon, says unlikely used floodplains.

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2. Food for LS and DS (stressor tables): Questionable if corbula substantially removes food

Negative Outcomes

1. Methylation of mercury-- Mag: 2, Cert. 3
 2. Removing flows from Sacto River into Yolo Bypass could adversely affect fish coming out of American and Feather River (somewhat less than American because can back track into Yolo)
 3. Increased temperatures could cause DS issues(?) uncertain. ET would reduce temps to compensate (?)
 4. Entrainment of salmon into central Delta—increased entrainment, predation, food shortage—could be major issue.
 5. Straying of Sacramento fish up into Mokelumne—could be major issue.
 6. Straying issue—Mokelumne salmon from EBMUD straying into Sacramento River.
 7. Potential to strand fish if not adequate passage and to harbor predators
 8. Possible import of NH₃ from wastewater if diversion is below the outfall
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