

DRAFT
DRERIP Coarse-Level Evaluation Summary:
“Upper” San Joaquin River floodplain restoration

Highlighted Text = Evaluator comments

Evaluation Date: July 29, 2008

Coarse-Level Evaluators:

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Action Description

Reconnect 4000 acres of floodplain habitat to the San Joaquin River between Vernalis and Mossdale that will flood in 18% of years for at least 30 consecutive days from late winter to early spring.

Approach: The approach includes:

1. Remove levees on both sides along ~15 miles of the San Joaquin River between Vernalis and the Mossdale Bridge. The new levee would be outside historical spillover areas.
2. Flooding would occur when the river overtops natural levees. Initial modeling suggests that this would occur at ~30 feet river stage (NAVD88). River discharge needed to flood 4000 acres is ~30,000 cfs.
3. New floodplain would be contoured to avoid potential for stranding of juvenile and adult fish.
4. A duration of 30 days was chosen for this restoration concept because San Joaquin River flows will likely constrain the ability to obtain appropriate frequency of a longer duration.

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

Outcomes Evaluation

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 Sacramento splittail spawning habitat.

Mag: 2.5, cert: 4 = *High Worth, Medium Risk*

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

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

3. Improved survival of larval and juvenile splittail and Chinook salmon (spring- and fall-run).

Mag 2.5: Cert-3 = *High Worth, Medium Risk*

4. Increased primary and secondary production on floodplain available to larval and juvenile and adult splittail, potentially steelhead, and Chinook salmon (fall-run) that are in the floodplain.

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

2. 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, Medium Risk*

Additional Positive Outcomes

1. Possibility for cooling of water temperatures.
2. Non-natives unlikely to spawn because floodplain dries out.

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Negative Outcomes

1. **Toxics mobilized from newly inundated agricultural lands (short term)**
2. **Methylation of mercury**
3. **Possibility for DO problem in Stockton Ship Channel if have late flood that produces lots of algae**

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