

January 22, 2014

From: Steven Schoenberg, Senior Biologist, USFWS, Sacramento Field Office

To: Jesse Patchett, PBI engineering; transmitted via email [jpatchett@pbieng.com](mailto:jpatchett@pbieng.com)

Re: FWS staff comments on Lower San Joaquin and Delta South Regional Flood Management Plan, draft document for public review/comment, dated January 2014

Below are my comments on the subject document; if any questions, please contact me by email reply ([Steven\\_Schoenberg@fws.gov](mailto:Steven_Schoenberg@fws.gov)) or phone (916-414-6564).

Fig 4: I cannot tell what is urban vs. rural/semiag land (colors don't show as different). Please check and revise if needed.

p. 30, bottom: seems to say that 12,500 cfs is needed to meet irrigation demand; please check - this flow I believe is the non-erosive capacity of the Mormon Slough (and Stockton Diverting Canal) projects for flood relief; it doesn't release 12,500 cfs for use in irrigation to my knowledge.

p. 32: re - "FEMA offered a PAL process". What is "PAL"? It doesn't appear on the list of acronyms (written out in parantheses on p. 33 appears, but not clear/explained on first use).

p. 33: re - LSJRFS "downstream to....Ship Channel"; please check, I believe this study area extends farther south, to include RD 17 phase III.

p. 49: Here and elsewhere, the absence of mention of the listed Valley Elderberry Longhorn Beetle is noted. The species has been recorded in the area, albeit not very recently. Consider mentioning the species (and other unmentioned listed species that may be present) as appropriate.

p. 50: re - the bullets on the sources of flooding, fourth bullet; it would appear there is some confusion here. Atmospheric river rainfall events aren't necessarily short/intense - they can run for days and more and are associated with larger scale upper atmosphere wind speeds which drop rain and snow on the west slope of the Sierras. What may be intended here are the short term, local, cloudburst events that can be a few hours and put down 2-6 inches of rain or more; and can cause interior local flooding. I don't recall these events being necessarily associated with atmospheric rivers or larger scale meteorology; but they might be. Please check/verify intent as to what is meant by "very large, short duration" (hours, days, other).

p. 80, bottom: re "....do not meet HMP standards....". What is HMP (not on list of acronyms)?

p. 165, bottom: "EAH" acronym is defined but not explained or references citation to explanation. Please consider adding more, or reference to more.

p. 168, bottom: "...levee configuration combined with lack of....flows in late winter and spring is the primary constraint to effective floodplain restoration in the lower SJ River". This is partly true.....however, I believe that part of the mainstem San Joaquin River is incised, the result of lack of sediment input from former sources now impounded and/or diverted. This incision may also limit overbanking frequency and duration. Please research and edit as needed.

p. 168, bottom: "The best opportunities for floodplain restoration are on the mainstem SJ river between Vernalis and Mossdale, and along portions of downstream distributaries including Paradise Cut and Old River."

A couple comments need to be made about this. First, floodplain restoration isn't the complete answer to recovery of the mentioned species. It could be part of it. However, the threat to many of these species - particularly fishes - occurs during low precipitation years; at that time - the habitat elements available are not on the floodplain (or bypasses, such as Paradise Cut) at all, but rather, on the margins of the mainstem river and tributaries - in the form of vegetation at the interface of land and water. That threat (i.e., to SRA cover), is not a function of inundation frequency, and can be addressed only by restoring and enhancing riparian vegetation on the river mainstem at the low water edge. Today - this vegetation (or the potential to restore it) is severely constrained by levees and associated maintenance practices. Hence - reliance on "fix in place" approaches to fortifying levees is largely inconsistent with the habitat needs to recover listed species. Second, as written - the term "best" opportunities, appears to infer (although it is not stated explicitly), that what is "best" is in reference to habitat that does not conflict with hoped urban development on the east side of the San Joaquin River, specifically, adjacent to RD 17 phase III. However, the east side harbors one of the few populations of RBR - rabbits which are genetically different from those to the west. To preserve the species, and its genetic diversity, as well as counter the threats of habitat loss (and loss of restoration opportunity) will likely involve some expanded habitat restoration to the east.

Instead, what is "best" for preservation and recovery of the listed species, would be as continuous a riparian corridor as possible, on both sides of the mainstem - as well as additional habitat on the distributaries such as Paradise Cut. FWS' refuges, Paradise Cut, and other lands to the west can certainly serve a role in recovery (or at least, prevention of extinction) of some species or species segments, but should not be perceived as part a complete recipe that would allow or offset complete urban development to the east of the mainstem to the exclusion of any other major recovery action.

Some rewording of the merits (and limitations) of actions at Paradise Cut seems to be in order.