



Westlands Water District

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**LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT
STATE CLEARINGHOUSE NO. 2019039136
DECEMBER 2019**

**COMMENTS PREPARED BY WESTLANDS WATER DISTRICT
FEBRUARY 14, 2020**

Westlands Water District (Westlands) owns the approximately 3,427-acre Yolo Ranch, which is at the southern end of the Yolo Bypass and directly northeast of and bordering Lookout Slough. Current activities include cattle grazing that relies on tide gates to surcharge irrigation canals from Shag Slough and the Toe Drain, whereby water is lifted to flood irrigate improved pastures. Planned activities include construction of the Lower Yolo Restoration Project (LYRP) in summer 2020 on approximately 2,150 acres with the remaining acres to continue in cattle grazing. The following items were reviewed in preparation of these comments relative to current and planned activities on Yolo Ranch:

- DEIR (December 2019)
- DEIR Appendix D (65% Basis of Design Report; December 2019)
- Appendix A to DEIR Appendix D (Draft Hydrologic and Hydraulic System Analysis; December 2019)
- DEIR Appendix S (Potential Salinity Impacts Assessment; April 2019)
- DEIR Appendix T (Potential Tidal Water Levels and Tidal Prism Impacts Assessment; June 2019)

The following environmental impacts identified in the DEIR are discussed further:

Impact #	Impact	Significance	Proposed Mitigation
HYDRO-iv.	Violation of salinity standards for agriculture during post-construction operation	Less than Significant	No mitigation proposed
HYDRO-vi.	Post-construction changes to tidal range that could affect in-Delta agricultural water supplies and drainage	Less than Significant	No mitigation proposed
HYDRO-vii.	Post-construction changes to tidal range that could affect in-Delta wetland and wetland riparian habitats	Less than Significant	No mitigation proposed
HYDRO-xii.	Changes to flood flow and conveyance that could result in a potential increase to flood risk	Less than Significant	No mitigation proposed

It is our understanding that the Shag Slough Levee will be breached at nine locations to provide primary tidal connectivity via subtidal breaches ranging in width from 300 to 575 feet, as well as degraded at two locations to provide flood benefits via two 1,500-foot sections, with the northern section degraded to 14.7 feet NAVD88 and the southern section degraded to 11.8 feet NAVD88 (DEIR page III-40 and Figure III-10). The latter would allow floodwaters during a significant flood event (larger than a 6-year flood) to be conveyed through Lookout Slough, resulting in approximately 0.5 feet of water surface elevation (WSE) reduction in the vicinity of the northern breach (Index Point 4) and approximately 0.1 feet at County Road 155 (Index Point 1) for the range of floods analyzed (Appendix A to DEIR Appendix D Table 8).

In review of Appendix D, it is our understanding that the northern levee degrade / inlet weir will not be protected with erosion protection measures because it will not serve a flood protection purpose in the future (Appendix D page 12). While the remnant Shag Slough Levee will not perform as a federal facility, it does provide a specific flood benefit that would otherwise change from the design condition should the inlet weir become compromised due to erosion via repeat overtopping. As shown by Appendix D Table 2, Figure 2, and Figure 3, there will be an increase in hydraulic stresses on the Shag Slough Levee upstream of Lookout Slough. The waterside levee slope is owned by Westlands and maintained by RD 2068. The waterside slope of the levee presently experiences hydraulic stresses that have scoured the levee toe as flood flows are funneled towards the levee in part due to the restricted height levees on Liberty Island, known as the Stair Step. Further, the Westlands tide gate on Shag Slough was completely compromised in the March/April 2011 flood, but was subsequently permitted and rebuilt in summer 2013. If the inlet weir becomes compromised, it has the potential to further increase hydraulic stresses on the Shag Slough Levee immediately upstream of Lookout Slough, beyond the increases identified in Table 2, thereby impacting waterside levee toe scour and/or the integrity of the tide gate. As clearly demonstrated by Figure 2, the modeled shear stresses exceed 5 lb/sf, which exceeds what is considered permissible for 12-inch riprap. **In response to HYDRO-xii, Westlands recommended that the Lookout Slough design include armoring of the inlet weir to protect the weir at its design elevation against scour from repeat**

overtopping events and that the integrity of levee and tide gate upstream of the inlet weir be monitored.

In review of Appendix S relative to Yolo Ranch, **Westlands concurs that impacts to the salinity standards for agriculture are less than significant (HYDRO-iv).**

In review of Appendix T, it is our understanding that the tide range will generally be compressed whereby MHHW will drop by approximately 0.2 feet and MLLW will rise by approximately 0.1 feet. Regarding irrigation, the tide gates on Shag Slough and the Toe Drain tidally charge irrigation canals on Westlands property, which will remain after construction of LYRP. If MHHW drops approximately 0.2 feet, five (5) lift pumps serviced by Shag Slough and four (4) lift pumps (two for Westlands, two for Mound Farms) serviced by the Toe Drain will cumulatively require greater energy to pump the same amount of water. **In response to HYDRO-vi, Westlands acknowledges that there is the potential for increased pumping costs for its grazing tenant. The Lookout Slough design should consider implementing vegetation removal within the Yolo Ranch irrigation canals to improve conveyance and offset the drop in MHHW.**

Further, construction of LYRP to restore tidal marsh habitat generally requires limited channel grading and very minimal mass grading to reconnect the adjacent waterways with the very gently sloped Yolo Ranch interior, where typical interior elevations are high intertidal and above 5 feet NAVD88. Reductions in MHHW by 0.2 feet has the potential to delay the establishment of approximately 130 acres of restored perennial emergent marsh habitat in the short-term due to tidal muting. **In response to HYDRO-vii, Westlands understands the cumulative habitat benefits within the Cache Slough Complex afforded by multiple constructed and planned restoration projects. Westlands recommends that DWR and DFW consider the effects of regional tidal muting during their restoration monitoring activities within the region when evaluating project-specific performance.**

Finally, it should be noted that the northern levee degrades includes degradation of lands owned by Westlands within Yolo County (DEIR Figure III-10 Section D-D). Westlands has not been notified by the Lookout Slough project proponents of the intent to degrade levees on lands owned by Westlands.

We look forward to receiving responses to our comments. If you have questions, please contact me at 559.241.6215 or jgutierrez@wwd.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jose Gutierrez', with a stylized flourish at the end.

Jose Gutierrez, P.E.
Chief Operating Officer