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SENT VIA EMAIL (FRPA@water.ca.gov)

Heather Green
California Department of Water Resources
3500 Industrial Blvd
West Sacramento, CA 95691

**RE: Comments on the Draft EIR for the Lookout Slough Tidal Habitat
Restoration and Flood Improvement Project**

Dear Ms. Green:

These comments on the December 2019 Draft Environmental Impact Report (“DEIR”) for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (“Project”) prepared by the California Department of Water Resources (“DWR”) are submitted on behalf of Local Agencies of the North Delta (“LAND”) and Reclamation District 501 (“RD 501”), (collectively “LAND”). LAND supports Delta restoration activities, but the impacts on the environment and adjacent land and water uses must be fully disclosed and fully mitigated in the context of CEQA, and effective coordination with adjacent landowners must continue throughout the life of the project. Responsible restoration, with a focus on disclosure, analysis and mitigation of system-wide impacts of all restoration projects in the Delta, complies with CEQA while minimizing adverse effects on stakeholders.

The Project Must Include Good Neighbor Policies and Adequate Mitigation Measures

DWR’s good neighbor checklist, while requiring some level of transparency and disclosure of the Project’s impacts, needs more attention to detail and actions to prevent future negative offsite impacts and engender stakeholder support. (DEIR, Appendix E.) LAND has developed its own, more robust, good neighbor checklist, attached as Exhibit 1. LAND’s good neighbor actions expand on DWR’s checklist by including ongoing monitoring, preventative measures, and responsive mitigation across key impacts common to restoration projects.

LAND’s good neighbor actions also call for establishing an ombudsman office and claims process for affected stakeholders. Such a process would provide a needed

alternative to the inefficient Tort Claims Act (Gov. Code, § 810 et seq.). DWR should consider incorporating these enforceable measures not just in the Project, but in all restoration projects moving forward.

Additional attention to implementation of a robust good neighbor approach would also assist in the Project's consistency with Delta Plan Policy DP P2, which requires projects to be sited to avoid or reduce conflicts with existing uses or uses described in local general plans, considering comments from local agencies and the Commission. (DEIR, p. V.A-12.) DP P2 is mentioned only once in the DEIR, and the DEIR does not include sufficient information to conclude that the Project is in fact consistent with Delta Plan Policy DP P2 (Cal. Code Regs., tit. 23, § 5011).

Impacts from restoration projects require ongoing monitoring, maintenance and management, whether in the form of good neighbor policies or formal mitigation measures. Despite LAND's consistent efforts to work with DWR to create viable long-term solutions to the issues posed by the project, DWR has in the past failed to adequately address these concerns. We hope the Lookout Slough project will be an opportunity to make progress on this issue, which is existential to the success of restoration efforts in the Delta.

Cumulative Impacts are Potentially Significant

The DEIR includes an expanded list of cumulative projects, as compared to that included in the Prospect Island Tidal Habitat Restoration Project Environmental Impact Report ("Prospect Island EIR"). However, the DEIR does not describe the full extent of the cumulative impacts of planned restoration projects. Important potential cumulative impacts, such as proliferation of harmful algal blooms ("HABs") and invasive aquatic species, are not disclosed or analyzed at all. Other impacts are not adequately discussed, providing a limited view of the system-wide changes that would be caused by the cumulative restoration projects.

For example, the cumulative water quality impact discussion does not substantively address methylmercury bioaccumulation. (DEIR, pp. V-13 to V-14.) While methylmercury bioaccumulation is mentioned, the analysis only cites to D-1641 salinity standards, which require averages to be met and do not address instantaneous salinity. (*Ibid.*) Cumulative methylmercury bioaccumulation from the project, is a potentially significant cumulative water quality impact.

Further, the discussion of salinity impacts ignores the reality that incremental increases in irrigation water salinity can build up in Delta soils and impair agricultural

productivity. (See, e.g., Exhibit 2, Michelle Leinfelder-Miles Testimony, pp. 4-5.) The project, in combination with other restoration projects, would change the tidal range, and increase the incursion of salinity into the region. Moreover, D-1641 salinity standards are averages and do not address instantaneous salinity levels. Reliance on D-1641 alone precludes full analysis of cumulative salinity impacts, which are potentially significant.

The Delta is a complex system, and additional analysis is required to address the cumulative impacts of all the restoration projects in the region. Since DWR has not attempted to analyze all of the restoration projects on a programmatic level, project-level EIRs must include robust cumulative impact analyses. While this EIR improves upon past efforts, it still does not provide adequate disclosure and discussion under CEQA.

Significant Invasive Weed Growth Impacts

The DEIR fails to disclose the impacts of weed growth on total water supply. Studies show that exotic invasive plant species can consume more water than naturally occurring species, impacting water available for agriculture. (See Exhibit 3, Pitcairn et al., Yellow Starthistle continues its spread in California (2006).)

Water hyacinth is a well-documented Delta invasive plant that uses a considerable amount of water which is lost to the atmosphere due to transpiration. Weeds in arid regions compete for water with native plant or commodity crops, and the weeds can also compete for nutrients, and diminish crop values. (Exhibit 4, Abouziena et al., Water loss by weeds: a review (2014) 7 Int. Journal of ChemTech Research 1, pp. 323-336.) Aquatic weeds cause water loss in canals due to extensive root systems and high transpiration rates, in addition to physically blocking the canals. (*Id.* at 326.)

Environmental impacts from weed proliferation are potentially significant to the Delta. (See Exhibit 5, Ali & Khedr, Estimation of water losses through evapotranspiration of aquatic weeds in the Nile River (2018) 32 Water Science, pp. 259-275.) For example, water loss through evapotranspiration from water hyacinth was 3.7 times that from open water. (Exhibit 6, Timmer & Weldon, Evapotranspiration and Pollution of Water by Water Hyacinth (1966).) A study on the Nile River supported the doubling of evaporation as a result of hyacinth, and “...concluded that the main problem of water losses through evapotranspiration of aquatic weeds in the Nile River (Rosetta Branch) represented in water hyacinth, according to the present study more than 90% of water losses were from water hyacinth.” (Exhibit 5, p. 274.) Given the Project’s potential exacerbation of invasive weeds, and inadequate mitigation, the potential impacts on water consumption must be disclosed and analyzed.

Mitigation Measure BIO-4, Invasive Species Abatement fails to include any enforceable performance measures or standards, and is thus an improperly deferred mitigation measure. (See DEIR, p. II-22.) All BIO-4 does is require at some point before construction, that protocols be established to identify what invasive weed species are present, treat those species “According to control methods and practices appropriate to those species” including herbicide, and determine timing of treatment. (*Ibid.*) If DWR defers formulation of the weed abatement protocols, it must describe the potential treatments it would use and establish performance standards. (*Sacramento Old City Association v. City Council* (1991) 229 Cal.App.3d 1011, 1029; see also *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275 (agency must “commit[] itself to mitigation and list[] the alternatives to be considered, analyzed, and possibly incorporated in the mitigation plan.”).) The DEIR fails to provide any of the information necessary for legal deferral of mitigation, and therefor the deferral of the weed abatement plan violates CEQA.

In addition, to be consistent with the Delta Plan, invasive species must be addressed. Under Delta Plan Policy ER P5 (Cal. Code Regs., tit. 23, § 5009.), the project must Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species. (See DEIR, p. III-51.) Delta Plan Program EIR Mitigation Measure 4-1 requires advanced mitigation planning for ecological restoration, implementation of construction best management practices, and restoration of areas affected by construction impacts, among other sub-measures. Delta Plan Measure 4-1 also states in part that, “an invasive species management plan shall be developed and implemented for any project whose construction could lead to introduction or facilitation of invasive species establishment.” (Appendix O, Mitigation and Monitoring Reporting Program, Delta Plan MMRP, Table 2.¹) Mitigation Measure BIO-4 does not meet these requirements.

Significant Harmful Algal Blooms Impacts

The DEIR fails to disclose or analyze the Project’s HABs impacts. The DEIR only discloses the potential for proliferation of HABs in the context of increased turbidity. (DEIR, p. IV.G-4.) Acknowledging that “[t]he emergence of increased concentrations of harmful algal blooms is indicative of potential problems with water stagnation” and then failing to analyze whether this Project would cause water stagnation sufficient to exacerbate the “increasing” problem is inadequate. (DEIR, p. IV.G-4.) According to DWR’s expert on HABs at the California WaterFix water rights hearing:

¹ Available at: <https://deltacouncil.ca.gov/pdf/delta-plan/2018-appendix-o-mitigation-monitoring-and-reporting-program.pdf>.

There are five primary environmental factors that trigger the emergence and subsequent growth of *Microcystis* in the water column of Delta waters, which are:

1. Water temperatures $>19^{\circ}\text{C}$ (66.2°F),
2. Low flows and channel velocities resulting in low turbulence and long residence times,
3. Water column irradiance and clarity >50 micromoles per square meter per second ($\mu\text{moles}/\text{m}^2/\text{s}$),
4. Sufficient nutrient availability (nitrogen and phosphorus), and
5. Salinity below 10 ppt.

(Exhibit 7, Robertson-Bryan, Inc., Report on The Effects of the California WaterFix on Harmful Algal Blooms in the Delta (2017).) Thus, turbidity is only one of at least five major factors triggering HABs in the Delta environment where the Project is proposed.

The DEIR's limited discussion, which considered only turbidity, with no consideration of other major factors and no analysis, is inadequate. The DEIR admits, HABs concentrations are increasing. (*Ibid.*) The DEIR's failure to actually address how the Project could itself cause increased HABs concentrations or proliferations does not meet the informational disclosure requirements of CEQA.

Past technical analysis for Prospect Island under the Fish Restoration Program Agreement demonstrated that 3-5 days of water retention begin to create risk of HABs, with increased risk as residence time goes up.² The potential increase in water residence time and temperature (DEIR, p. IV.G-28) combine to increase the likelihood the Project increases HABs proliferation (see Exhibit 9, Berg & Sutula, Factors Affecting Growth of Cyanobacteria (2015)). This potentially significant impact must be disclosed and analyzed.

² See Prospect Island Tidal Restoration Project Analysis of Primary Productivity Enhancement and Export for Phase 2 Alternatives Evaluation. Resource Management Associates (February 2014), pp. 2-10. This document was previously posted (e.g., http://www.water.ca.gov/environmentalservices/frpa_prospect_restoration.cfm) and was relied upon by the Prospect Island EIR but is no longer available online. See also, Exhibit 8, Phase 2 Modeling Synthesis Report Prospect Island Tidal Habitat Restoration Project (July 2014).

Significant Impacts from Invasive Asian Clam Food Web Alterations

As the DEIR admits, the Project would create colonization opportunities for invasive Asian clams. (DEIR, p. IV.D-86.) Thus, the conclusion that the Project would have a less than significant impact is confounding. An invasive clams and mussels monitoring and response plan or actionable performance standards should be included in Mitigation Measure BIO-4 Invasive Species Abatement to mitigate any potential export of Asian Clam facilitated by the Project. Currently, BIO-4 only addresses invasive weeds, but it should apply the same framework to invasive animal species by establishing target species, enforcement triggers, and possible treatments.

Significant Impacts from Methylmercury Accumulation

Methylmercury is a bioaccumulating neurotoxin subject to the SWRCB's regulation and under a Total Maximum Daily Load;³ however, the DEIR dismisses methylmercury impacts without any basis. The DEIR's discloses that the Project could cause short-term increases in methylmercury production during or immediately after construction, leading to transportation to adjacent waterways. (DEIR, p. IV.D-87.) Yet this localized increase in bioaccumulation of the toxin is dismissed with a reference to yet unfinished research. (*Ibid.*) Relying on unfinished research to reach a significance determination as to a dangerous toxin violates CEQA's basic disclosure requirements. Moreover, the conclusion that any increase in methylmercury bioaccumulation would essentially be *di minimis* is belied by DWR's own prior conclusions on other Delta projects.

The extent of the potential increase in bioaccumulation from the Project is never quantified, nor are the subsequent effects of such an increase. This approach contrasts starkly with DWR's previous analysis of restoration actions in the California WaterFix Final EIR/S ("CWF FEIR/S"). As described in the summary of the Delta tunnels' impacts, restoration actions are known sources of methylmercury: "[U]ptake of mercury from water and/or methylation of inorganic mercury may increase in localized areas as part of the creation of new, marshy, shallow, or organic-rich restoration areas. Although not quantifiable, on a local level, increases in methylmercury concentrations may be measurable." (Exhibit 9, CWF FEIR/S, p. 8-949.)

³

See

https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/.

The DEIR does not describe any effort to measure increases in methylmercury accumulation from the Project. The CWF FEIR/S further identifies “the potential for increases in methylmercury concentrations in the Delta result in this potential impact being considered significant because, as described in the Discussion column *any potential* measurable increase in methylmercury concentrations would make existing mercury-related impairment measurably worse.” (Exhibit 9, CWF FEIR/S, p. 8-950 [*italics added*].) This impact was found to be significant and unavoidable. (See *ibid.*) Thus, any potential increase in methylmercury concentrations makes impairment measurably worse, and the DEIR’s conclusion is not supported by substantial evidence.

Agricultural Impacts are Potentially Significant

The DEIR claims that the conversion of 1,460 acres of prime farmland is less than significant with mitigation. (DEIR, p. IV.B-10 to -12.) Regardless of the improvements to or conservation of other farmland, the Project would still result in a net loss of prime farmland in the Delta. (*Ibid.*) This is a significant and unavoidable impact according to the DEIR’s own significance threshold. Moreover, the cumulative impact is significant as “planned and completed ecosystem restoration projects in the Cache Slough Complex ... would convert farmland to non-agricultural use ... including over 2,000 acres of important farmland.” (DEIR, p. V-7.) The DEIR only claims that the cumulative impact is incremental because of the flawed conclusion that the project-level impact is less than significant. (*Ibid.*)

Williamson Act Impacts are Potentially Significant

The Williamson Act “was enacted to curb ‘the rapid and virtually irreversible loss of agricultural land to residential and other developed uses’” (*Honey Springs Homeowners Assn. v. Bd. of Supervisors* (1984) 157 Cal.App.3d 1122, 1139; see also *Sierra Club v. City of Hayward* (1981) 28 Cal.3d 840, 850–853.) The Williamson Act includes specific provisions addressing whether proposed uses are consistent with specified “principles of compatibility.” (Gov. Code, § 51238.1.) “The provision for ‘compatible uses’ allows local governments familiar with the particular circumstances of each preserve to define other uses that will not compromise or impair the agricultural capability or operations on the parcels.” (*Cleveland National Forest Foundation v. County of San Diego* (2019) 37 Cal.App.5th 1021, 1044, citing Gov. Code, §§ 51231, 51238, 51238.1.)

The DEIR’s significance threshold for the Project considers whether the proposed Project would conflict with a Williamson Act contract. (DEIR, p. IV.B.9; see also CEQA Guidelines, App. G, section II(b).) The DEIR claims that because the site Williamson

Act contracts list open space as a compatible use, the Project would be a compatible use. This is a logical fallacy unsupported by law. The proposed Project does not allow public access, and converts prime and other valuable agricultural lands and accessible open space to flooded tidal marsh with restricted access. Therefore, the Project's change in land use is not comparable to the Williamson Act "open space" nor consistent with the purpose of Williamson Act. As a result, the EIR fails to identify any potentially feasible mitigation measures or project alternatives that could reduce the significance of these impacts, which violates CEQA. (See *Banning Ranch v. City of Newport Beach* (2017) 2 Cal.5th, 918, 938 (failure to analyze impacts to environmentally sensitive habitat areas resulted in inadequate discussion of appropriate mitigation measures).)

CONCLUSION

The DEIR must be revised and recirculated to address the deficiencies identified in this letter. Please contact me with any questions about these comments.

Very truly yours,

SOLURI MESERVE
A Law Corporation

By:



Osha R. Meserve

ORM:mre

cc: LAND Members
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Exhibits

Exhibit 1 – Good Neighbor Checklist for Restoration Projects.

Exhibit 2 – Testimony of Michelle Leinfelder-Miles, State Water Resources Control Board Hearing on the California WaterFix Water Rights Change Petition.

Exhibit 3 – Pitcairn et al., Yellow Starthistle continues its spread in California (2006).

Exhibit 4 – Abouziena et al., Water loss by weeds: a review (2014) 7 Int. Journal of ChemTech Research 1, pp. 323-336.

Exhibit 5 – Ali & Khedr, Estimation of water losses through evapotranspiration of aquatic weeds in the Nile River (2018) 32 Water Science, pp. 259-275.

Exhibit 6 – Timmer & Weldon, Evapotranspiration and Pollution of Water by Water Hyacinth (1966).

Exhibit 7 – Robertson-Bryan, Inc., Report on The Effects of the California WaterFix on Harmful Algal Blooms in the Delta (2017).

Exhibit 8 – Phase 2 Modeling Synthesis Report Prospect Island Tidal Habitat Restoration Project (July 2014).

Exhibit 9 – Berg & Sutula, Factors Affecting Growth of Cyanobacteria (August 2015).

Exhibit 10 – California WaterFix Final EIR/S (2016) (excerpt).