

DEPARTMENT OF RESOURCE MANAGEMENT

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February 14, 2020

California Department of Water Resources  
Attn: Heather Green  
3500 Industrial Blvd  
West Sacramento, CA 95691  
Via email [FRPA@water.ca.gov](mailto:FRPA@water.ca.gov)

**Subject: Solano County comments on Lookout Slough Tidal Habitat Restoration and Flood Improvement Project DEIR**

Dear Ms. Green;

Solano County appreciates this opportunity to comment on the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Draft Environmental Impact Report (DEIR) that was released for 60-day public review on December 16, 2019. According to the California Department of Water Resources, the DEIR describes the Proposed Project and provides DWR's assessment of potential environmental impacts and includes proposed measures to avoid, mitigate, or offset those environmental impacts, as required under the California Environmental Quality Act (CEQA).

The Lookout Slough Restoration Project is proposed in the unincorporated portion of Solano County and includes converting approximately 3,400 acres of agricultural lands to tidal marsh and other wetlands.

**Project Description**

Section 21065 of the Public Resources Code defines the term "project" as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following: (a) An activity directly undertaken by any public agency; (b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies; [or] (c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies."

The DEIR, at page VIII-2, identifies Ecosystem Investment Partners ("EIP") as the project applicant, which implies that the Lookout Slough Project ("Project") is not an activity directly undertaken by the Department of Water Resources ("DWR") for purposes of subdivision (a) of section 21065. Instead, the DEIR's identification of EIP as the project applicant and DWR as the lead agency implies one of two things: either the Project will be undertaken by EIP with financial

support from DWR in the form of contracts, grants, subsidies, loans, or other forms of assistance; or the Project involves the issuance by DWR to EIP of a lease, permit, license, certificate, or other entitlement for use.

Section 15124 of the CEQA Guidelines<sup>1</sup> requires that the project description portion of an EIR include a list of permits and other approvals required to implement the project, to the extent such information is known by the lead agency. If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed, preferably in the order in which they will occur. The Governor's Office of Planning and Research will assist a lead agency or responsible agency in identifying state permits required for a project.

The DEIR, at page III-50, describes Table III-4 as identifying federal, state, regional, and local agencies that may have jurisdiction over aspects of the Project and may require "certain permits and approval that include but are not necessarily limited to those outlined in Table III-4." This level of non-specificity is inadequate for purposes of Section 15124. As described above, the DEIR describes the Project as being undertaken by EIP rather than by DWR, and thereby acknowledges that the Project will be undertaken by EIP only after DWR approves a contract, grant, subsidy, loan, or other form of financial assistance, or issues a lease, permit, license, certificate, or other entitlement for use. To the extent DWR will be approving financial assistance or issuing an entitlement for use for the Project, it is incumbent on DWR to acknowledge those project-approval actions and identify them with specificity on Table III-4. CEQA compliance is not a project approval action such as the approval of financial assistance or issuance of an entitlement for use. The lead agency must certify that the final EIR has been completed in compliance with CEQA *before* it approves the project. (CEQA Guidelines, § 15090.) When an EIR has been prepared for a project, the lead agency shall not approve or carry out the project until after the EIR has been certified and considered by the agency. (CEQA Guidelines, §§ 15091 & 15092.) "With private projects, approval occurs upon the earliest commitment to issue or the issuance by the public agency of a discretionary contract, grant, subsidy, loan, or other form of financial assistance, lease, permit, license, certificate, or other entitlement for use of the project." (CEQA Guidelines, § 15352, subd. (b).)

Agreement Number 4600012583, executed by DWR on October 2, 2018, provides that prior to commencement of construction of the Project, fee title to the Project property will be transferred to DWR. Following transfer of title, EIP will implement and complete construction of the Project as DWR's contractor. The description of the Project provided in Agreement Number 4600012583 is inconsistent with the project description provided in the DEIR. The Agreement describes the Project as being undertaken by DWR, while the DEIR describes the Project as being undertaken by EIP after approval by DWR.

The distinction made in Section 21065 between project directly undertaken by a public agency, pursuant to subdivision (a), and a project approved by a public agency through approval of

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<sup>1</sup> The CEQA Guidelines are located at 14 C.C.R. § 15000, *et seq.*

financing or issuance of entitlements, pursuant to subdivisions (b) or (c), is significant to the adequacy of the DEIR for two reasons, either of which causes both the project description and agricultural impact analysis in the DEIR to be inadequate.

If the Project will be undertaken by EIP following the approval of financing or issuance of entitlements by DWR, then the County will have jurisdiction over EIP's development and use of the Project. Under the Solano County Zoning Regulations, the Project is a permissible use on the property and within the A-80 zoning district, provided a discretionary use permit is approved by the County. In addition, grading and other construction activities on the property would be subject to County jurisdiction and would require County permits, including permits for removal of any hazardous materials storage containers (such as underground or above ground storage tanks). These County permits must be identified in Table III-4 and the County must be identified in the DEIR as a Responsible Agency for the Project. In addition, the analysis of compatibility with existing zoning in Chapter IV.B should be revised to reflect that a County use permit will be required for the Project.

On the other hand, if the Project will be directly undertaken by DWR, with EIP possibly acting as DWR's contractor or contract manager as described in Agreement Number 4600012583, then the project description in the DEIR must be revised to clarify that role of DWR. Due to its status as a state agency, a project directly undertaken by DWR is not subject to County land use regulation. The Williamson Act, however, imposes strict requirements limiting a public agency's ability to acquire land within an agricultural preserve. See Government Code section 51290 and following. Section 51293 relaxes these strict requirements somewhat when the acquisition is for purposes of flood control works or public works for fish and wildlife enhancement and preservation, by the notification and consultation requirements of Section 51291 and related sections are still applicable to such projects. For land within an agricultural preserve that is subject to a Williamson Act contract, the contract is null and void when the public agency acquires the land. If the Project will be directly undertaken by DWR, Chapter IV.B should be revised to describe the notification and consultation requirements, and to identify both the Department of Conservation and Solano County as responsible agencies in this consultation process. That chapter should also indicate that the Williamson Act contracts will be terminated upon acquisition of the Project property by DWR.

#### **National Environmental Policy Act (NEPA) review**

NEPA review is required yet is not considered with CEQA at this time. The Project consists of ecosystem development of agricultural land and significant change to federal flood control elements requiring permits which should not be bifurcated. The effects of the entire Lookout Project should be considered together. The Project as described will breach State and Federal flood system levees, construct additional State-Federal Project levees and change the hydrology of the Yolo Bypass and Cache Slough region.

### **DEIR Water Quality Modeling Data Not Made Readily Available**

Despite several requests, all of the relevant water quality electrical conductivity (EC) and hydraulic modeling data was not made available to Solano County, with relevant data not arriving until as late as February 5 and February 11, 2020. Of particular concern are seasonal data and data that break down monthly and daily averages (which often do not reflect changes of significance) into smaller increments. As mandated in Section 15147 of the CEQA Guidelines, supporting technical data must be made readily available for public examination. Unless all of the relevant data is made available the commentator cannot independently determine the significance of impacts summarized in the DEIR. This is important in determination of effects the variety of projects and water operations will have within the County and the Delta. Most notably, data for only one water year was simulated in the model (discussed in Appendix A) which is not enough to determine full long-term impacts. In not making such data readily available, DWR has not proceeded in the manner required by law.

### **Agricultural Sustainability**

The continued viability of agricultural lands in the region with the introduction of habitat restoration projects, especially such large-scale projects such as this, is something Solano County takes very seriously. The County appreciates inclusion of the Good neighbor checklist on page p IV A-12 and IV B-1 and would like to work with DWR and relevant State agencies to develop a more comprehensive Checklist for State use for this Project and in the future. Although agricultural mitigation is accounted for at the Zanetti and Wineman properties, as identified on pages IV B-12 et. sec., we strongly encourage the state and the project proponent to work very closely with the County to ensure that this mitigation is effective. Furthermore, we are not clear on the drainage benefits to Wineman and request additional information and/or direction to the background information in the DEIR and the appropriate appendices. As a reminder, Solano County requires a minimum of 1000 acres of agricultural conservation and Swainson Hawk conservation easements within the County. The location of such conservation easements shall be in close consultation with Solano County.

### **Hazards and Hazardous Materials**

Haz-ii - Natural Gas Wells and Pipelines - Page III-34: The site is within the Maine Prairie Gas field which is an active dry gas field. According to the Department of Conservation Well Finder GIS maps, approximately 40 abandoned, plugged, or cancelled natural gas wells are located within the project site. The project description (page III-34) indicates that decommissioned wells will not be disturbed except in areas of proposed grading. Page IV.F-2 indicated that during a Phase I ESA, a pipe was identified as being associated with an abandoned gas well/pipe network. Overall the project includes breaching and removing levees, creating over 20 miles of interior tidal channels, and additional excavation totaling approximately 5,255,000 cubic yards of soil moved within the site. Since most of the site will include some surface grading, it is likely that abandoned, or previously decommissioned wells and associated piping will be exposed. Removal or alternating the surface material surrounding sealed natural gas wells may also impact the integrity of surface seals on these wells which could pose pathway risks for hydrocarbons or other contaminants to migrate into the surface water or groundwater. Article 4.2 of the Public Resources

Code requires re-abandonment of previously abandoned gas wells if deemed to pose potential risk or hazard. Mitigation measure HAZ-1: Natural Gas Well and Pipeline Abandonment and Avoidance, page IV.F-15 indicated that EIP shall develop plans and procedures *for natural gas well and pipeline abandonment and avoidance during construction, which may include but are not limited to re-abandonment, plugging, removal, or avoidance of on-site natural gas pipelines and wells*. These procedures should include assessing the long-term integrity of the abandoned well and pipeline seals located in and near inundated areas against risk of impacts to the environment and water quality. The Department of Conservation may require re-decommissioning at-risk or partially plugged natural gas wells that are exposed during site work. Geologic Energy Management Division (CalGEM, formerly DOGGR) administers regulations and procedures pertaining to all oil and gas wells on public and private land. Operators must obtain permits for permanently sealing and closing—also known as plugging and abandoning—wells.

#### **Dewatering and Revegetation: Impacts to Species, Adjoining Lands**

Dewatering of the site is discussed on Pages III-29, 30. Will there be impacts to adjacent properties or groundwater wells from dewatering? Impacts to species occupying the site (other than Giant Garter Snake (GGS)) from dewatering, use of heavy construction equipment and earth movement are not discussed in the DEIR. How reasonable is it to assume GGS will voluntarily move to the southeast corner of the property or move offsite and how are these impacts addressed? What are the impacts to other species on the site? What are the impacts to adjacent agriculture and residences in the area from vectors, and other displaced terrestrial species?

**Invasive Species:** The Project would convert agricultural land to tidal marshland which may result in new invasive species that can impact surrounding agricultural land uses. Page III-33 notes that target invasive plant species would be mechanically removed and /or sprayed as part of the land clearing process. No evaluation was presented regarding potential impact from spraying to surface water, species, and/or adjacent agricultural areas?

An active Revegetation Plan is needed. Page III-41 specifies that tidal marsh areas are anticipated to revegetate with tule and cattail through “natural recruitment”. Natural recruitment, or revegetation can take many years (or even decades) and is usually unsuccessful due to the favorable environment for invasive plant species that may already exist on the site and throughout the area if not carefully managed. Should the Project wish to get credit for the functional habitat it develops and creates habitat that assists aquatic species and food web production, an ongoing, active and managed revegetation program is strongly encouraged.

#### **Water Rights and Water Intakes**

The proposed project includes abandonment of intake piping along various levees that were previously utilized for agricultural and residential property. Will the existing water entitlements and place of use be transferred? If not, will the water right owners be compensated, or water right licenses be replaced/reestablished.

In addition, there are a number of agricultural intakes near the Project in the Cache Slough region that will be affected to an as yet unknown degree by the tidal restoration and flood project. Agriculture depends on the continued availability of water of sufficient quality and quantity. The ecosystem projects will change water quality and, possibly will bring aquatic species near and potentially into intakes. The DEIR does not evaluate the potential impacts to the ongoing use of water intakes in the area and likelihood of the effects of intake infrastructure or operations and endangered species. Furthermore, no mitigation is identified in the DEIR that could feasibly address such impacts. In fact, DWR, the County and others are working on incidental take protections through developing and permitting a focused habitat conservation plan – an effort that is completely unaddressed by the DEIR. Lastly, there will be economic and social effects associated with the impact on intakes, which, in accordance with Section 15131(b) of the CEQA Guidelines, should be used to determine the significance of physical changes caused by the Project.

### **Impacts to Housing and Surrounding Communities**

According to the DEIR, Page IV.A-20 mentions only *three* housing units are on the project site. The DEIR project indicated “The loss of three housing units does not represent a significant number of displaced persons or housing units, and no replacement housing would need to be constructed.” However, the Environmental Assessment report prepared by Blackburn (October 31, 2017) identified nine single family residences on the Liberty Island Ranch Property. An accurate accounting of the number of housing units that will be lost due to the project is needed to evaluate full impacts of such loss. In addition, the DEIR does not identify mitigation for the loss of these housing units. Furthermore, severing access for the public to lower Liberty Island Road, Liberty Island Road Bridge, and Liberty Island would degrade, limit, and significantly impact the public views of these features and create division for the fishing, hunting, and naturalist communities that are currently available to the public. As such, the Project should consider alternatives that would allow continued public right of way and access to these locations.

Utilities, page IV.A-21 discusses the relocation of utilities (electric power service) onto a neighboring property. Is this relocation being done with the permission of the adjacent property owner? Through easement or other means? Will this service be extended to other users?

### **Impacts on Levees surrounding the Project site**

Geology/Soils Page IV.A-4 of the DEIR indicates that proposed project would not cause substantial adverse effects involving strong seismic ground shaking. *"The Proposed Project would alter levees and other facilities on-site that could be exposed to potential adverse impacts during ground shaking; but the modified levee system would be more resilient to earthquakes than the current levees..."* The project intends to remove portions of existing levees and construct the Duck Slough Setback levee. Only the new structure (Duck Slough Setback Levee) and the Cache/Hass Slough Training Levee, and remaining portion of Shag Slough levees that are surrounding the project site are proposed to be strengthened or modified to withstand seismic shaking or other erosion measures. However, removing existing levees or portions thereof could impact levees that surround existing valuable agricultural lands, making these levees susceptible to erosion, wind waves, scouring, and tidal action, and therefore more vulnerable during seismic shaking events if not mitigated and strengthened to current US Army Corp of Engineering standards.

Furthermore, substantial subsidence and/or collapse of nearby levees are likely with regular inundation of the Project land and without maintenance by public agencies (public right of way interests, public water conveyance interests, and levee maintenance/reclamation district(s)). As such, resultant removal and modification of existing levees could significantly impact surrounding levees protecting valuable agricultural lands if not mitigated.

Lands north and west of project will also be susceptible to greater inundation. As such, flood plain mapping needs to be studied to assess impacts that the Project may create to the local and regional flood plains as well as to the FEMA 100-year flood plain (i.e. increase base flood elevations). Project needs to study and include drainage improvements and mapping to determine the potential impacts for these issues.

The resultant project will incur a substantial soil erosion and loss of topsoil due to conversion of these land during grading operations without best management practices. Long term soil erosion into Shag Slough may be significant without runoff control measures. Grading, drainage, and erosion control plan must be reviewed and permitted by Solano County Department of Resource Management in accordance with Solano County Ordinance Chapter 31. Post-construction water flows from the Project through the new tidal marshes may increase the rate of erosion and sedimentation into Shag Slough.

### **Public and Emergency Access and Conflicts with Existing Easements**

The Project proposes to breach the levee under Liberty Island Road and vacate the public easement that serves Liberty Island Road, Shag Slough Bridge, and Liberty Island. A Road Vacation process subject to Solano County Board of Supervisors approval is required for Liberty Island Road. However, no mitigation is proposed since the proposed project description on page IV.A-21 indicates that emergency and public access will not be impacted because the property and remaining access will not serve populated areas. Severing access to Liberty Island Road,

Shag Slough Bridge, and Liberty Island will impact emergency response and public access to these locations. In addition, PG&E transmission towers will remain and will be accessible via peninsulas. Removal of existing and supporting roadway access to the PG&E towers may curtail response time to these towers in an emergency; especially with locked gates and use of levees for access. Furthermore, these changes as proposed in the Project will result in substantial impairment of adopted emergency response plans and emergency evacuation plans. The Project should consider alternatives, including culverts, bridges, or other accessible drainage ways, that would allow continued public right of way and emergency access to these locations

Severing and vacating the public right of way and access to Liberty Island Road, Shag Slough Bridge, and Liberty Island will conflict with the Solano County General Plan goal for improving agricultural, pedestrian, and general public access and circulation to eastern Solano County. It is also inconsistent with the California Constitution itself. (See Cal. Const., Art. X, § 4.) The Project may also significantly impact and degrade the condition of connecting roadways through importation (trucking) of soils over Solano County's roads.

### **Recreation**

The document does not address negative impacts to public access, offers no alternatives to recreation in the area, and does not acknowledge the suite of problems that will arise from the public's continued use of this area despite gates and other obstructions. For these reasons, we also disagree with the assertion on page IV I-9 that emergency vehicle and Marine Patrol interaction will be reduced in this area. These impacts must be addressed in the document. The assumption on page IV.J-5 that most Californians travel an hour for recreation is not relevant in this context and inadequate justification for not addressing the impacts described above. Severing and vacating the public right of way for Liberty Island Road, Shag Slough Bridge, and Liberty Island as proposed will significantly impact the shoreline fishing and other recreational opportunities for the public in the Delta, which is already relatively limited.

Does the Project suggest leaving the Liberty Island/Shag Slough Bridge in place despite the intention to vacate all access to it? The commentary on page IV.A-21, IV.I-9 would indicate this is the case. The Project should consider alternatives, including culverts, bridges, or other accessible drainage ways, that would allow continued public right of way and access to these locations. We also suggest modification of the Project to leave the road in place, do not degrade the Shag Slough levee up to the bridge and instead culvert necessary levee breaches in that section. This would allow continued use of the road by those needing access, as well as continued public access to the area and adjacent Liberty Island. Road vacation requires a lengthy process and permits are required. The document is incorrect in that it mentions only one neighbor to the north requiring road access. This road is used by the public, landowners to the north, as well as RD 2068, to access its facility located just to the north of the project.

### **Environmental Setting, i. Environmental Site Assessments**

Two Phase I Environmental Site Assessments (ESAs) (Appendixes J, K, L and M) were conducted for the project site which identified potential areas of concern. Subsequent Phase II ESAs were conducted at each the Bowlsbey and Liberty Farms properties which included collecting shallow soil samples at each property. Laboratory analysis of the shallow site soil identified elevated concentrations of volatile organic compounds, petroleum hydrocarbons, organic pesticides, and metals. The Phase II reports compared the analytical results to the USEPA Regional Screening Levels and the San Francisco Bay Regional Water Quality Control Board Environmental Screening levels (ESLs) for residential site use. However, the reported concentrations were not compared to Water Quality Objectives for the Central Valley Region, of which the site is located; nor for potential leaching or impacting surface and drinking water or risks to the environment including bioaccumulation and fish ingestion. Furthermore, the DEIR indicated that samples collected near a waste collection area exhibited elevated levels of Chromium reported "*at levels low enough to be safe if the soils are left undisturbed*". However, the proposed project includes massive grading, reuse of onsite soils, and inundation of the project to tidal fresh water. As such, impacted soil are likely to be disturbed and may result in unauthorized releases to surface water. Overall, findings of elevated concentrations identified at the site warrant reporting of potential unauthorized release(s) (Heath and Safety Code § 25501 through 25510, CCR § 2703, and Water Code § 13271) and further assessment for possible mitigation. At minimum the findings should be reported to the Solano County Certified Unified Program Agency (CUPA), the Central Valley Regional Water Quality Control Board and the Department of Toxics Substance Control. Any hazardous materials and/or storage including fuel storage tanks may require permitting by the CUPA prior to removal. All impacts identified should be assessed and mitigated as required under the oversight of the Central Valley Region Water Quality Control Board and/or Department of Toxics Substance Control.

Conversion of agricultural lands to tidal marsh wetlands may create significant releases of atmospheric methane, with potential for other emissions, which will significantly increase the Greenhouse Gas (GHG) emissions from the Project acreage. This directly conflicts with the Solano County General Plan and Climate Action Plan goal of reducing GHG emissions. The Project needs to consider alternatives to address this impact or incorporate mitigations for these impacts.

### **Alternatives**

The range of alternatives to the Project described in Chapters II and VII are very narrowly defined, consisting of minor variations of the project on the site, including a flood-only alternative that does not meet the objectives of the Project. The DEIR should evaluate a broad range of alternatives to the project, including other options outside of the proposed Project boundaries. This could include a project to develop functional habitat at the partially flooded Liberty Island site, already owned by the State.

**Cumulative Effects of the Project with others in the region**

Page V-5 to V-7 list many projects in the Yolo Bypass/Cache Slough region, Suisun Marsh and the Delta. However, the document is silent on the fact that many of these projects are elements of larger plans for flood control, ecosystem restoration and fish recovery, all implemented as separate projects with little or no comprehensive modeling and research of cumulative effects. For example, the larger Yolo Bypass region has been the focus of a number of the projects listed, that together (and with climate change) will allow the Bypass to be flooded more frequently and for a longer duration than it is today. This would establish necessary flood capacity to help address climate change and to bolster salmonid survival by allowing fish into the Bypass to rest and feed. The cumulative effects of this project, along with others such as the Fremont and Lisbon Weir Projects and the Yolo Bypass Salmonid & Fish Passage Projects as well as the ecosystem projects need to be modeled so that cumulative impacts can be identified and disclosed.

Thank you for the opportunity to review and comment on the DEIR.

Sincerely,



Bill Emlen  
Director of Resource Management

CC: Board of Supervisors  
Birgitta Corsello, County Administrator  
Bernadette Curry, County Counsel

Attachment – Appendix A: Water Quality

## APPENDIX A: Water Quality

### **The Draft EIR misinterprets the CEQA Guidelines for Water Quality significant impacts**

The DEIR in Appendix S, Potential Salinity Impacts Assessment, on page 2, states:

With regard to assessing effects of changes in salinity for CEQA, the most important significance criteria “result in substantial adverse effects on beneficial uses of water” and “violate existing water quality standards, waste discharge requirements, or otherwise substantially degrade water quality.” Based on how DWR has recently analyzed the impacts of tidal wetland restoration projects on salinity (e.g., Prospect Island, Winter Island, Decker Island), the determination of whether a change is considered “significant” depends on whether there would be an exceedance of a standard set forth in the State Water Resources Control Board’s (SWRCB’s) Bay-Delta Water Quality Control Plan (Bay-Delta Plan) and/or Water Rights Decision 1641 (D-1641).

The reference to “otherwise substantially degrade water quality” is from CEQA Appendix G, Environmental Checklist Form, under VIII. Hydrology and Water Quality, term (f). This term acknowledges that there can still be significant adverse water quality impacts when water quality is well below any regulatory standard such as those in the SWRCB’s D-1641.

For example, farmers in the north Delta choose crop types and irrigation practices based on their expectation of salinities that are well below the agricultural EC and urban chloride concentration standards in D-1641.

Similarly, there is no D-1641 chloride standard at either CCWD’s Old River intake or Victoria Canal intake. That does not however allow for degradation of water quality in those two locations. CCWD constructed Los Vaqueros Reservoir based on a historical availability of water of 50 mg/L chloride concentration or better at those two central Delta intakes. A project that causes increases in salinity and reduced availability of 50 mg/L water in those locations can cause significant adverse impacts.

DWR’s method for analyzing the significance of adverse impacts of tidal wetland restoration projects on salinity (e.g., Prospect Island, Winter Island, Decker Island) which was based on whether a change would be an exceedance of a D-1641 standard was inadequate.

As discussed below, the Lookout Slough EIR must also use a significance criteria based on a percentage increase in salinity, whether or not a standard is exceeded.

### **The Draft EIR fails to define acceptable Significance Criteria for identifying significant adverse impacts**

As discussed in Solano County’s April 22, 2019 comments on the Notice of Preparation for Proposed Lookout Slough Restoration Project, the EIR for the Lookout Slough project must include a detailed analysis of the adverse impacts of the proposed restoration of approximately 3,000 acres of tidal marsh habitat on water quality in the full Sacramento-San Joaquin Delta. The Lookout Slough DEIR fails to use accepted Bay-Delta water quality significance criteria of 5 mg/l chloride or 5% increase, whichever is greater. In the case of specific conductance (EC) the corresponding criterion should be the greater of 20  $\mu$ S/cm or 5% increase.

California Water Code Section 85020 also states that the policy of the State of California is to achieve the following objectives that the Legislature declares are inherent in the coequal goals for management of the Delta, including:

- (e) Improve water quality to protect human health and the environment consistent with achieving water quality objectives in the Delta.

It would be inconsistent with this law to implement Bay-Delta projects that fail to mitigate for degradation of their significant water quality impacts.

According to the modeling results provided to Solano County by DWR, the EcoRestore Projects, including the proposed Lookout Slough project would increase salinities at CCWD's Rock Slough intake off Old River in the central Delta by as much as 9.2%. Key excerpts from the DWR water quality modeling data are presented in the table below. Significant adverse water quality impacts (salinity increases greater than 5%) occur in October, November and December for the very limited simulation period of January 10, 2019 through January 31, 2019 (less than one year).

This is a significant adverse impact on Bay-Delta stakeholders and must be fully disclosed and mitigated. CCWD and other urban water agencies are operated to meet regulatory water quality requirements for drinking water and industrial water use on a daily basis. Disclosing impacts only as long-term averages is not acceptable.

**CCWD Intake at Rock Slough  
Daily-averaged Specific Conductance (EC as  $\mu\text{S}/\text{cm}$ )**

| Date     | Existing Base EC | Existing with Lookout Slough EC | Regional Projects Base EC | Regional Projects with Lookout Slough EC | Cumulative Adverse Impact in EC | % Increase in EC |
|----------|------------------|---------------------------------|---------------------------|--|---------------------------------|------------------|
| 10/30/09 | 692              | 702                             | 750                       | 755                                      | 63                              | 9.10             |
| 10/31/09 | 682              | 692                             | 739                       | 744                                      | 63                              | 9.17             |
| 11/1/09  | 672              | 681                             | 728                       | 733                                      | 62                              | 9.19             |
| 11/2/09  | 663              | 672                             | 718                       | 723                                      | 61                              | 9.17             |
| 11/3/09  | 655              | 664                             | 710                       | 715                                      | 60                              | 9.11             |
| 11/4/09  | 648              | 658                             | 702                       | 707                                      | 59                              | 9.03             |

According to a RMA Report provided to Solano County by DWR (file: LookoutSloughSalinityImpactsD1641\_06May2019.pdf), significant adverse water quality impacts (greater than 5%) also occur at Prisoners Point. These data were monthly-averaged EC so the percentage increase in EC for daily EC data is expected to be even larger than the 8.9% in the table below. Data very recently provided by DWR show the maximum daily increase is 11.2%.

**Monthly-average computed Base EC, Base EC with Lookout Slough, Regional Restoration EC and Regional Restoration with Lookout Slough EC (µS/cm) and relative (%) EC change due to the Regional and Lookout Slough projects at D29 – San Joaquin River at Prisoners Point**

| Month    | Existing base EC µS/cm | With Lookout Slough EC µS/cm | Regional restoration base EC µS/cm | Regional with Lookout EC µS/cm | Total EC Change µS/cm | Total EC % Change |
|----------|------------------------|------------------------------|------------------------------------|--------------------------------|-----------------------|-------------------|
| Jan-2009 | 542.7                  | 544.6                        | 531.3                              | 532.9                          | -9.8                  | -1.8              |
| Feb-2009 | 456.2                  | 459.5                        | 443.7                              | 446.0                          | -10.2                 | -2.2              |
| Mar-2009 | 220.3                  | 220.3                        | 217.2                              | 217.2                          | -3.1                  | -1.4              |
| Apr-2009 | 219.2                  | 219.7                        | 217.5                              | 217.9                          | -1.3                  | -0.6              |
| May-2009 | 211.3                  | 211.9                        | 209.4                              | 209.9                          | -1.4                  | -0.7              |
| Jun-2009 | 193.2                  | 193.9                        | 192.4                              | 193.0                          | -0.2                  | -0.1              |
| Jul-2009 | 223.6                  | 222.9                        | 225.3                              | 224.4                          | 0.8                   | 0.4               |
| Aug-2009 | 360.3                  | 362.9                        | 371.9                              | 372.2                          | 11.9                  | 3.3               |
| Sep-2009 | 413.0                  | 421.8                        | 434.2                              | 438.8                          | 25.8                  | 6.2               |
| Oct-2009 | 323.6                  | 333.1                        | 344.8                              | 352.4                          | 28.8                  | 8.9               |
| Nov-2009 | 322.3                  | 328.9                        | 337.5                              | 343.5                          | 21.2                  | 6.6               |
| Dec-2009 | 402.9                  | 406.8                        | 411.2                              | 414.9                          | 12.0                  | 3.0               |

The DEIR on page 6 of Appendix S states:

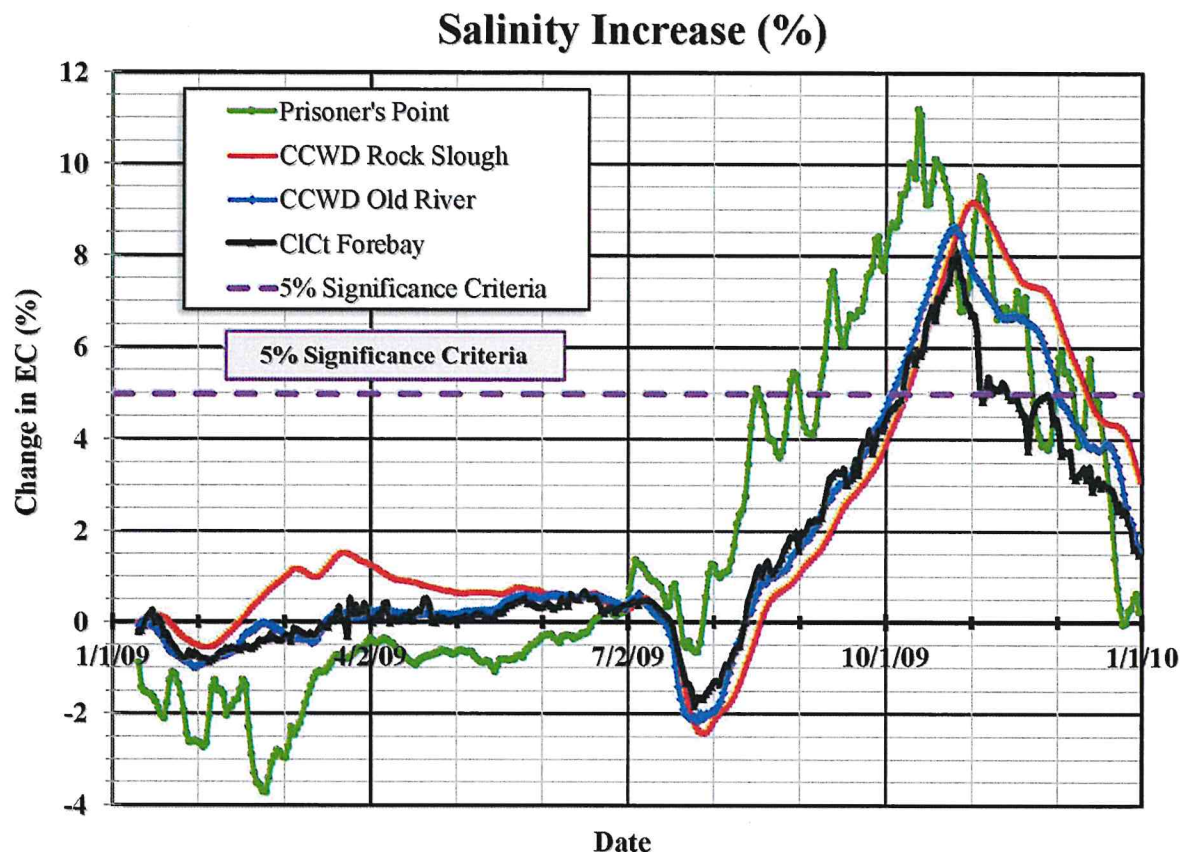
The combined effect of the Project on Delta EC in combination with other planned tidal wetland restoration project can at times of the year be appreciable for certain D-1641 monitoring compliance stations when compared to existing baseline conditions without these Delta restoration projects in place (e.g., greater than 8 percent increase in EC for an October 2009 scenario at Station D29); nevertheless, even with the combined effects of the Project with other restoration projects currently under planning, Delta salinities would remain in compliance with D-1641 requirements. Therefore, the Project's incremental effect on salinity in the Delta would not be considerable and the cumulative impact is less than significant.

This is not accurate. The increase of 8.9% in the monthly-averaged EC at Prisoners Point is significant because it exceeds the 5% significance criteria generally used for Bay-Delta projects.

SWRCB D-1641 includes a fish and wildlife standard of 440 µS/cm (maximum 14-day running average) for April and May for all but critical water years. However, significant adverse impacts to salinity in this region, at any time of the year, will affect all beneficial uses of Delta water and must be fully mitigated.

The simulated daily increases in salinity (EC) at Prisoners Point, CCWD's Rock Slough and Old River intakes and the State Water Project's Clifton Court Forebay intake are shown as a times series for 2009 in the graph below. Some of these data were provided by DWR on February 11,

just before the comment deadline. Not only are there significant adverse water quality impacts well in excess of the 5% significance criteria but they persist for much of the one-year simulation period. This also points to the need for a longer simulation period. Will the salinity increases be larger and occur more often in critical years? Will exceedances of 5% occur every year?



*Figure: Time series plot of percentage increases in salinity at Prisoners Point, CCWD's Rock Slough and Old River intakes and the State Water Project's Clifton Court Forebay intake for January-December 2009.*

The EIR must fully analyze and disclose all these significant water quality impacts, as daily averages, and commit to actions to avoid or fully mitigate these impacts.

### **The Lead Agency has Improperly Piecemealed the Full Proposed Project**

The Lookout Slough proposed project is one of a number of Regional Projects that are part of California EcoRestore, such as Decker Island, Dutch Slough, Lower Yolo, McCormack Williamson, Prospect Island, and Tule Red. As is apparent from the table above, the cumulative impact of all these projects, even if individually they might increase salinity by less than 5%, will be significant.

By piecemealing these projects and carrying out separate environmental analyses, DWR is failing to fully analyze and disclose the full adverse impacts of the habitat restoration projects. Such piecemealing is impermissible. (See *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, 293.)

### **The DEIR fails to analyze and disclose the impacts of the Lookout Slough project due to climate change and sea level rise.**

Among the goals and objectives listed in the DEIR is objective (e): *To the greatest extent practical, preserve existing topographic variability to allow for habitat succession and resilience against future climate change.* (e.g., pages II-3 and III-22)

The DEIR does argue on page VII-26 that this objective will be met for the project because:

*The existing topography does contain a significant amount of land at elevations that would convert to tidal marsh habitat with rising sea levels. The Duck Slough Setback Levee would be designed to be resilient to rising sea levels. This alternative and the Project address this goal to the greatest extent practical.*

However, the DEIR fails to analyze and disclose the significant adverse water quality impacts of the project due to future climate change and sea level rise. Other environmental analyses prepared for DWR assumed a sea level rise at the Golden Gate Bridge of 15 cm (0.5 feet) by 2025 and a projected sea level rise of 45 cm (1.5 feet) by 2060.

The DEIR should also include modeling of tidal hydrodynamics, flows and water quality after 1.5 feet of sea level rise.

### **The DEIR does not analyze and disclose the impacts of the necessary reoperation on the SWP and CVP to compensate for the effects of the Lookout Slough project and other Regional projects**

The DEIR discloses that the Lookout Slough restoration project will result in changes to EC and chloride concentrations within the north, central and south Delta and will change the location of the estuarine habitat standard X2. The modeling appears to have been carried out using the historical Delta inflows and export unchanged for each alternative.

In future operations, Delta operations may need to change to offset the cumulative effects of the Regional Projects and Lookout Slough. The one year of model of each alternative gives no

indication of how much federal Central Valley Project (CVP) will be needed to offset water quality impacts or how much the CVP exports from the Delta would need to be reduced.

The EIR should include analysis of these impacts and a commitment to fully mitigate these impacts on the CVP.

### **The DEIR is inadequate because it only analyses project impacts for a single dry year**

In Solano County's April 22, 2019 scoping comments, we requested that the Lookout Slough DEIR disclose and fully mitigate the significant adverse impacts of the proposed project on salinity in the Delta under the full range of hydrologic conditions (especially critically-dry years). Specifically, Solano County requested Central Valley and Delta operations modeling and Delta water quality modeling over the full historical 82-year modeling period (water years 1922-2003).

Merely analyzing a calendar dry year is insufficient to fully disclose the range of possible significant adverse environmental impacts of the project.

The DEIR in Appendix S on page 6 states: *The modeling scenario for this study replicates all of 2009, which is representative of typical dry year conditions, when achieving Delta salinity standards is often a challenge.* In footnote 1, the DEIR argues that: *In wet years, salinity issues are generally not considered a problem; in critically dry years, freshwater supplies are often so limited that they constrain the ability to achieve salinity standards through management actions.*

The SWRCB requires that its salinity standards be met in all water year types, even critical years. In critical years when flows are lowest and salinities are typically highest, the significant adverse impacts of the proposed project are likely to be even higher than in dry years. The DEIR must disclose the effects of the project over a range of many different water year types, not just one dry water year.

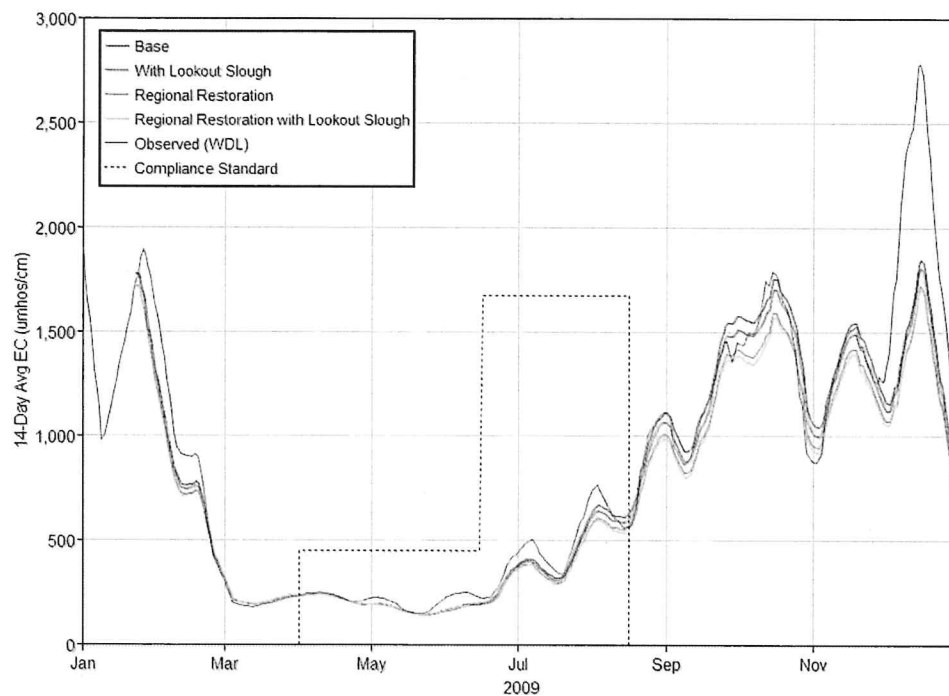
### **The DEIR modeling does not accurately simulate the existing historical base case**

The 6 May 2019 RMA slide show, titled Lookout Slough Restoration: Modeling of EC and Hydrodynamic Impacts contained graphs that compared the RMA model simulations of EC for January-December 2019 with the historical field EC measurements. The graph for D22 – Sacramento River at Emmaton is reproduced below. In December 2019, the historical Emmaton EC peaks at about 2,800  $\mu\text{S}/\text{cm}$  whereas the simulated existing base case only peaks at about 1,800  $\mu\text{S}/\text{cm}$  (only two-thirds as much).

Similarly, the corresponding graph for D15 – San Joaquin River at Jersey Point shows big differences between the simulated and historical EC data for October through December.

The significant differences between actual and simulated EC data brings into question the accuracy of the Draft EIR analysis of adverse water quality impacts.

## D-22 – Sacramento River at Emmaton



## D15 – San Joaquin River at Jersey Point

