REVISED FINAL ENVIRONMENTAL IMPACT REPORT

LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT

State Clearinghouse No. 2019039136

Prepared For:

Ecosystem Investment Partners 5550 Newbury St. Baltimore, Maryland 21209

Lead Agency

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

Prepared By:

Environmental Science Associates 2600 Capitol Avenue, Suite 200 Sacramento, CA 95816

Date: September 2023







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CHAPTER 1 Introduction

1.1 Introduction and Background

The California Department of Water Resources (DWR) prepared a Final Environmental Impact Report (EIR) for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project) pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, Section 21000 et seq.), which was certified by DWR on November 2, 2020 (2020 Final EIR, State Clearinghouse No. 2019039136). The 2020 Final EIR included revisions to and responses to comments on the Draft EIR completed in December 2019 (2019 Draft EIR). Subsequently, four lawsuits challenged the certification of the 2020 Final EIR. On January 5, 2023, the Contra Costa Superior Court (Court) dismissed all claims, save for one issue: that further analysis was required to evaluate the Project's potential impact on recreational opportunities to fish from the shoreline, as addressed in Section IV.J, Recreation, under impact iii.

In response, DWR prepared a Revised Final EIR for the Project, which was released for a 45-day public review period from June 1 through July 17, 2023. The Project's Revised Final EIR focused exclusively on those portions of the analysis related to the Project's potentially significant impacts on recreational opportunities to fish from the shoreline, and included revisions amplifying and clarifying the previous analysis, as directed by the Court. Section IV.J, Recreation, of the Project's 2020 Final EIR was decertified and recirculated for public comment regarding potentially significant impacts on recreational opportunities to fish from the shoreline. Consistent with the CEQA Guidelines, when only a portion of an EIR is being recirculated, lead agencies may properly limit comments to only the revised portions of the EIR. See Chapter 2, Global Response 1.2, Scope of the Revised Final EIR, for more details.

1.2 Contents and Organization of the Revised Final EIR

This Revised Final EIR has been prepared in accordance with CEQA to accompany the 2020 Final EIR; these documents together constitute the Revised Final EIR for the Project. The Revised Final EIR is organized as follows:

• **Chapter 1, Introduction.** Chapter 1 includes introductory and background information, describes the CEQA process completed to date and procedures to be followed for the completion of CEQA, and summarizes Revised Final EIR organization.

- Chapter 2, Comments Received and Responses to Comments. Chapter 2 presents comments received on the Revised Final EIR, lists the commenters, and provides responses to these comments. Revisions made to Chapter IV.J, Recreation, resulting from responses to comments and/or DWR staff-initiated changes are also summarized and shown in strikeout where text is removed and by <u>double underline</u> where text is added.
- Appendices. Appendix A to this Revised Final EIR presents a revised Chapter IV.J, Recreation, as well as the 2023 Technical Memorandum upon which it relies (no revisions have been made to the 2023 Technical Memorandum). Appendix B includes a series of exhibits/attachments that were submitted with comment letters. Appendix C includes the Court's Peremptory Writ of Mandate and Judgment Granting the Petition for Writ of Mandate. Appendix D includes the Court's Statement of Decision.

This Revised Final EIR contains written responses to all comments received by DWR from agencies and the public on the Revised Final EIR (see Chapter 2). Because multiple comments were received that addressed a number of key issues, DWR prepared comprehensive responses addressing these issues (global responses). Each global response provides background regarding the specific issue, how the issue was addressed in the Revised Final EIR, and additional clarification and explanation as appropriate to address the comments. This Revised Final EIR also includes a list of commenters and comment letters received and provides individual responses to comments. In addition, this Revised Final EIR includes text changes made in response to comments and initiated by staff (see Appendix A).

The information provided in this Revised Final EIR (including the responses to comments in Chapter 2 and the text changes in Appendix A) clarifies, amplifies, or makes insignificant changes to the 2020 Final EIR and the publicly reviewed Revised Final EIR and does not change the previous findings or conclusions made by DWR related to the Project.

1.3 Project Summary

The Project would restore tidal marsh that would partially fulfill DWR's obligations under Reasonable and Prudent Alternative (RPA) 4 of the 2008 United States Fish and Wildlife Service (USFWS) Delta Smelt Biological Opinion (BiOp) and is consistent with RPA I.6.1 of the 2009 National Marine Fisheries Service (NMFS) Salmonid BiOp for the coordinated operations of the State Water Project and the Central Valley Project. The Project Site is comprised of three properties in the Cache Slough Complex at the southern end of the Yolo Bypass. The Project is located in unincorporated southeastern Solano County, California, with a small portion of work extending into Yolo County.

The 2008 USFWS BiOp RPA 4 and 2009 NMFS BiOp Reasonable and Prudent Alternative (RPA) I.6.1 were carried forward as baseline conditions in the USFWS *Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and the State Water Project* and the NMFS *Biological Opinion on Long Term Operation of the Central Valley Project and the State Water Project*, both of which were issued on October 21, 2019. In addition, Section 9.1.1 of the *Incidental Take Permit for Long-Term Operation of the State Water*

Project in the Sacramento-San Joaquin Delta (2081-2019-066-00) (2020 LTO ITP), issued by the California Department of Fish and Wildlife (CDFW) on March 31, 2020, carries forward the 8,000-acre tidal habitat restoration requirement as compensatory mitigation for activities under the 2020 LTO ITP.

The Project would create habitat that is beneficial to Delta Smelt (*Hypomesus transpacificus*) and other fish and wildlife species and widen a portion of the Yolo Bypass to increase flood storage and conveyance. When completed, the Project would provide habitat for Delta Smelt, Longfin Smelt (*Spirinchus thaleichthys*), Chinook Salmon (*Oncorhynchus tshawytscha*), Green Sturgeon (*Acipenser medirostris*), Steelhead (*Oncorhynchus mykiss*), giant garter snake (*Thamnophis gigas*), and other species. The Project is also designed to meet regional flood protection objectives in a manner consistent with the 2017 DWR Sacramento Basin-wide Feasibility Study.

The Project involves constructing a new setback levee along Duck Slough and Liberty Island Road. The existing levee at Shag Slough would be breached and partially degraded to provide tidal and flood connectivity between Duck Slough and Shag Slough. The existing Cache/Hass Slough Levee would be enhanced to increase stability and reduce long-term maintenance cost. The Cache/Hass Slough Levee would continue to function to prevent increased water surface elevations in the Cache Slough Complex. Grading, placement of fill material, and revegetation would be used to restore and enhance upland, tidal, subtidal, and floodplain habitat.

1.4 CEQA Process

1.4.1 Public Participation and Environmental Review

DWR has completed the following procedural requirements in compliance with CEQA.

- A Notice of Preparation (NOP), an Initial Study, and Notice of Completion (NOC) were filed with the State Clearinghouse (State Clearinghouse Number (SCH #) 2019039136) on March 21, 2019 for public review ending on April 22, 2019.
- The NOP and information on the scoping meeting was provided to: (1) State, local and federal agencies; (2) the Yolo County and Solano County Clerk offices; (3) public libraries in Davis, Dixon, Rio Vista, and Vacaville; (4) local newspapers; and (5) other interested parties.
- A public scoping meeting was held on April 10, 2019 at the Olde Vets Hall (231 N. First Street) in Dixon California from 6:00 to 8:00 pm.
- The NOC and copies of the 2019 Draft EIR were filed with the State Clearinghouse on December 16, 2019 with public review ending on February 14, 2020.
- A Notice of Availability (NOA) of the 2019 Draft EIR and information on the public meeting was provided to: (1) State, local and federal agencies; (2) the Yolo County and Solano County Clerk offices; (3) public libraries in Davis, Dixon, Rio Vista, and Vacaville; (4) local newspapers; and (5) other interested parties. The NOA and the 2019 Draft EIR were also made available on DWR's website.

- A public meeting to receive comments on the 2019 Draft EIR was held on January 22, 2020 at the Olde Vets Hall (231 N. First Street) in Dixon, California from 5:30 to 7:30 pm.
- The 2020 Final EIR, which included revisions to and responses to comments on the 2019 Draft EIR, was certified by DWR on November 2, 2020. A Notice of Determination (NOD) was subsequently posted to the State Clearinghouse the next day (November 3, 2020).
- At the direction of the Court, DWR decertified that portion of the 2020 Final EIR regarding the Project's potential impact on recreational opportunities to fish from the shoreline on March 6, 2023.
- A Notice of Availability (NOA) of DWR's Revised Final EIR, which amplified and clarified the previous analysis related to the Project's potential impact on recreational opportunities to fish from the shoreline, was provided to interested parties and petitioners on June 1, 2023, beginning a 45-day public review period ending on July 17, 2023.
- The Revised Final EIR was made available on the DWR website, at the Dixon Public Library, and at the DWR offices during the public review period.

1.4.2 CEQA Certification

The Revised Final EIR will be made available 10 days prior to certification. In order to complete the CEQA process, DWR will formally review and consider this Revised Final EIR, pursuant to the requirements of Section 15090 of the CEQA Guidelines. After considering the anticipated and potential environmental impacts of the Project, as identified in the 2020 Final EIR and the Revised Final EIR, DWR will choose whether or not to certify the Revised Final EIR.

In the event DWR certifies the Revised Final EIR, a Notice of Determination (NOD) will be filed as set forth in CEQA Guidelines Section 15094.

CHAPTER 2 Comments Received and Responses to Comments

2.1 Introduction

This chapter contains written responses to all comments received by Department of Water Resources (DWR) from agencies and the public on the Revised Final Environment Impact Report (Revised Final EIR) for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project). Table 2-1 lists the parties who submitted comments on the Revised Final EIR during the public comment period.

Bracketed comment letters are included in Section 2.3.

LIST OF COMMENTERS		
Letter # Commenter		
1	Yocha Dehe Wintun Nation	
2	Central Delta Water Agency	
3	Liberty Island Access	
4	Backcountry Hunters and Anglers	
5	Francis Coats	

TABLE 2-1

2.2 **Global Responses**

DWR prepared global responses to address common topics raised in multiple comment letters. Each global response provides background regarding the specific topic, and additional clarification and explanation as appropriate to respond to issues raised in comments. Each global response is numbered, and that number is referenced in individual responses that incorporate a global response. The following global responses were prepared:

- 1. Purpose and Scope of the Revised Final EIR
- 2. Substantial Evidence Standard
- 3. Methods of Analysis

Global Response 1: Purpose and Scope of the Revised Final EIR

1.1 Purpose of the Revised Final EIR

Some comments raised topics that were unrelated to the purpose of the Revised Final EIR as directed by the Court. DWR has prepared this Revised Final EIR to reconsider a singular issue: the Project's potential impact on recreational shoreline fishing opportunities. A Final Environmental Impact Report (2020 Final EIR) for the Project was prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and was certified by DWR on November 2, 2020 (State Clearinghouse No. 2019039136), which included revisions and responses to comments on the Draft Environmental Impact Report completed in December 2019 (2019 Draft EIR).

Subsequently, four lawsuits were filed that challenged the certification of the 2020 Final EIR on several legal grounds. On January 5, 2023, the Contra Costa County Superior Court (Court) entered its Peremptory Writ of Mandate (Writ) and Judgment Granting the Petition for Writ of Mandate (Judgment), included as Appendix C, dismissing all claims save for one issue: that further analysis was required to evaluate the Project's potential impact on recreational shoreline fishing opportunities. Pursuant to the Writ and Judgment, on March 6, 2023, DWR partially decertified that portion of the 2020 Final EIR related to the Project's potential impact on recreational shoreline fishing opportunities. This Revised Final EIR was recirculated for a 45-day public comment review period from June 1, 2023 to July 17, 2023, and this document incorporates DWR's responses to comments received during that public comment period in compliance with the Superior Court's Writ and Judgment.¹

The Court's Statement of Decision (Appendix D) concluded that, based on the analysis in the 2020 Final EIR, the Project would cause a loss of approximately 3 miles of shoreline fishing opportunity as compared to a total of approximately 6 miles of shoreline fishing opportunity in the Delta. Accordingly, the Superior Court determined that the Project may substantially decrease opportunities to fish from the shoreline within the Delta region, and that substantial evidence did not support a finding of a less than significant impact as stated in the 2020 Final EIR.

Chapter 2 of this Revised Final EIR focused exclusively on those portions of the analysis related to the Project's potential to substantially decrease opportunities to fish from the shoreline within the Delta region and includes revisions amplifying and clarifying the previous analysis as directed by the Court. Only Section IV.J, Recreation, of the Project's Final EIR was recirculated for public review and comment. DWR's reconsideration of the Project's potential to substantially decrease opportunities to fish from the shoreline within the Delta region is as follows:

• DWR gathered additional data and further reviewed the potential for the Project to impact potential shoreline fishing opportunities on the Project Site. Based on an analysis of

¹ See Appendix C. The Writ and Judgment resulted from four separate lawsuits filed by the City of Vallejo (Case No. MSN21-0558), Central Delta Water Agency (Case No. MSN21-0560), Reclamation District Nos. 2060 and 2068 (Case No. MSN21-0559), and Solano County Water Agency (Case No. MSN21-0561).

"available shoreline for fishing opportunities"² provided by the Project Site, comments received about shoreline fishing opportunities, and a collection of survey data from site users, DWR has concluded that the Project would *not* impact 3 miles of potential shoreline fishing opportunities, as estimated in the Court's Statement of Decision; rather, potential impacts would be limited to approximately 1.46 miles of "available shoreline for fishing opportunities."

- DWR collected additional information about potential shoreline fishing opportunities within the local and regional vicinity of the Project Site.³ Based on this additional data gathering and review, including mapping of potential shoreline fishing areas, the collection of survey data from actual users, information maintained by the California Department of Fish and Wildlife and from other public sources, DWR has determined that substantially more recreational shoreline fishing opportunities exist in the local vicinity of the Project Site (i.e., within a 60-minute driving radius⁴) and within the Delta than were disclosed in the 2020 Final EIR. This includes more than 22 miles of "available shoreline for fishing opportunities" at more than 50 locations in the Delta.
- Overall, DWR found that 1.46 miles of "available shoreline for fishing opportunities" would be impacted by the Project, compared to more than 22 miles of "available shoreline for fishing opportunities" within a 60-minute drive from the Project Site and within the Delta Region.

After reconsideration, DWR has concluded that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region, as set forth in Chapter 2 of the Revised Final EIR.

1.2 Scope of the Revised Final EIR

Some comments raised topics that were not within the scope of the analysis of the Revised Final EIR. This global response provides the context for how the scope of the analysis is focused and why it does not include analysis of other effects that were not the subject of the Revised Final EIR. Comments that addressed the scope of the Revised Final EIR include: 4-1 and 5-1. The response to each of these comments provides more details addressing specific topics raised.

As stated in the June 1, 2023 Notice of Availability (NOA), the Revised Final EIR (Section IV.J, Recreation) focused exclusively on those portions of the analysis related to the Project's potential to substantially decrease opportunities to fish from the shoreline within the Delta region and only included revisions amplifying and clarifying the previous analysis as directed by the Court (see *1.1 Purpose of the Revised Final EIR*).

² The 2023 Technical Memorandum cited in the Revised Final EIR outlines the methodology used to evaluate shoreline fishing opportunities. The "available shoreline for fishing opportunities" analysis focuses on shoreline free of dense vegetation such that it provides a realistic opportunity to fish. This methodology mirrors and builds upon the methodology used to develop Table IV.J-1 in the 2019 Draft EIR.

³ The 2023 Technical Memorandum cited in the Revised Final EIR defines "regional scale" as the area within the legal boundary of the Delta and defines the "local scale" as the area within a 60-minute drive of the Project Site.

⁴ The Revised Final EIR circulated to the public included a typo on page IV.J-3, last paragraph, first sentence, in stating a 60-mile driving radius rather than a 60-minute driving radius. This sentence was corrected as follows: "In addition, in order to ground-truth the information on fishing opportunities within a 60-minute mile drive of the Proposed Project Site..."

Consistent with CEQA Guidelines Section 15088.5(f)(2), DWR provided notice in the NOA:

"that public comments should be limited only to the recirculated portion of the Lookout Slough EIR, and those sections that have been revised to address recreational opportunities to fish from the shoreline. (See 14 CCR Sec. 15088.5(f)(2).) When only a portion of an EIR is being recirculated, as is the case here, lead agencies may properly limit comments to only the revised portions of the EIR. (See *Ione Valley Land, Air, & Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 173; see also *Save Civita Because Sudberry Won't v. City of San Diego* (2021) 72 Cal.App.5th 957, 979; see also *Citizens Against 24th Street Widening Project v. City of Bakersfield* (July 2, 2018, F074693)."

Global Response 2: Substantial Evidence

Some comments assert that DWR did not provide substantial evidence to support the less than significant impact conclusion in the Revised Final EIR. Comments that raised issues regarding whether DWR provided substantial evidence to support its conclusions include: 2-1, 2-2, 2-3, 2-5, 3-1, and 3-2. The response to each of these comments provides more details addressing specific topics raised.

Determining whether a project may have a significant effect on the environment is "based on substantial evidence in light of the whole record" (CEQA Section 21082.2(a)). CEQA Guidelines Section 15064 defines substantial evidence as facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. Argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence that is not credible does not constitute substantial evidence.

Some comments also disagree with the conclusions reached by DWR after consideration of the information presented in the Revised Final EIR. CEQA allows for differences of opinion with respect to impacts on environmental issues addressed in an EIR. As Section 15151 of the CEQA Guidelines states, even "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. Perfection is not required, but the EIR must be adequate, complete and a good faith effort at full disclosure (CEQA Guidelines Section 15151).

As demonstrated in the responses to comments, the Revised Final EIR provides an adequate, complete, and good faith effort at full disclosure of the physical environmental impacts and the conclusions are based upon substantial evidence in light of the whole record. The analysis was prepared by experts based on scientific and factual data. Therefore, DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the additional information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline in the Delta region.

See **Global Response 3: Methods of Analysis** for discussion of the additional data collected to verify and amplify information on potential local and regional shoreline fishing opportunities

within a 60-minute drive of the Project Site, and within the Delta region, and the methods used in the analysis to determine significance in the Revised Final EIR.

Global Response 3: Methods of Analysis

Some comments questioned the reasoning behind the methods used by DWR to assess the impact or provided alternate assessment methods. These comments generally expressed concern about three aspects of the analysis methods (Consideration of Legality in Assessment Methods, Consideration of Parking in Assessment Methods, and Concerns Related to 60-Minute Driving Radius) and are addressed as such below in Sections 3.1 through 3.3. Comments that raised issues regarding the methods used by DWR to evaluate the impact include: 2-2, 2-3, 2-4, 2-6, 3-1, 3-2, 3-3, 3-4, 4-2, and 4-3. The response to each of these comments provides more details addressing specific topics raised.

The Court's Judgment specifically states on page 23 that, "... the concern is whether the Project will substantially decrease *opportunities* to fish from the shoreline within the Delta region. Thus, whether people are currently using the Project Site for fishing is not the inquiry. Instead, the inquiry is how will the Project effect opportunities to fish from the shoreline within the Delta." (*Emphasis* included by the Court.)

Additional data was therefore collected to verify and amplify information on potential shoreline fishing opportunities within a 60-minute drive of the Project Site and within the Delta region (defined as the legal Delta boundary). Research was undertaken to augment and validate the amount of "available shoreline for fishing opportunities," as presented in Table IV.J-1: Sample of Available Shoreline at Shoreline Fishing and Pier Fishing Locations within a 60-minute Drive of the Project Site (pages IV.J-4 and IV.J-5 of the Revised Final EIR), through review of publicly available information, including but not limited to websites, online forums, and videos. As stated on page IV.J-4 of the Revised Final EIR, the list of locations included in Table IV.J-1 is not exhaustive, and it includes locations that may require fees or have other access restrictions; but, it is intended to provide a more complete context of the scale of "available shoreline for fishing opportunities" in the vicinity of the Project Site.

The Revised Final EIR aims to evaluate the amount of "available shoreline for fishing opportunities" that would be removed by the Project and contextualize the Project's potential impact by comparing it to the amount of "available shoreline for fishing opportunities" within a 60-minute drive and within the broader Delta region. To do so, the Revised Final EIR (page IV.J-4) clearly defines "available shoreline for fishing opportunities" both on and off-site as "shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish." The goal of the analysis in the Revised Final EIR was to identify "available shoreline for fishing opportunities" offered by the Project Site and in the local and regional area of the Project Site, using publicly available information. The Revised Final EIR does not offer a comparison of the quality or accessibility of the identified locations (based on legality, parking availability, driving radius or any other factors).

3.1 Consideration of Legality in Assessment Methods

Some comments expressed concerns about the legality of accessing the potential shoreline fishing locations identified in Table IV.J-1 of the Revised Final EIR; these comments include 2-3, 3-2, and 4-3.

The definition of "available shoreline for fishing opportunities" used in the analysis does not consider the legality of public access or use of the shoreline. This was done purposefully, as public concern related to the removal of informal (illegal) shoreline fishing opportunities on the Project Site were raised previously. No formal facilities existed on the Project Site and the majority (81%)⁵ of the shoreline identified as "available shoreline for fishing opportunities" potentially impacted by the Project is located on private land and is not legally open to the public for shoreline fishing or any other recreational uses.

To maintain an apples-to-apples comparison of opportunities provided by the Project Site versus within the Delta region, the technical legality of public use was therefore not included as a parameter when identifying potential shoreline fishing locations in the Delta region, as listed in Table IV.J-1. DWR's analysis identified potential shoreline fishing locations from a variety of sources including the Delta Protection Commission's Inventory of Recreation Facilities in the Delta; the Delta Stewardship Council's Delta Plan; and CDFW, City, and County Parks Department webpages; as well as unofficial public website sources such as online angler's forums and crowd-sourced lists of fishing spots.⁶ In addition, in-person visitor surveys were conducted at the Project Site in September/October 2021.⁷ Question 8 of the 2021 in-person visitor survey asked respondents if they fish in other locations in the Delta; the responses to this question were used to identify additional commonly known potential shoreline fishing locations within a 60-minute drive of the Project Site. Therefore, Table IV.J-1 presents a sample of commonly known locations with the potential for shoreline fishing to occur but is not determinative of accessibility; site-specific rules and limitations may apply.

DWR's methods specifically included the review of unofficial data sources, such as online angler's forums and crowd-sourced lists of fishing spots, to target *informal* potential shoreline fishing locations. There are no official data repositories that report the magnitude or locations of informal shoreline fishing in the Delta, despite its popularity, therefore this information can only be gathered from the types of online, crowd-sourced forums used in the Revised Final EIR analysis, which makes these sources an adequate, publicly available source of information under CEQA. The locations in Table IV.J-1 were identified regardless of potential fee requirements or access restrictions; the list was developed only to provide a more complete context of the scale of

⁵ The Revised Final EIR identifies that the Project site provides access to 1.46 miles of "available shoreline for fishing opportunities." Of this total, 1.18 miles is located on the Project site, on the western bank of Shag Slough, which is on private property where shoreline fishing is not legally permitted. This equates to 81% of the total amount of shoreline ((1.18/1.46)*100).

⁶ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region.

⁷ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

"available shoreline for fishing opportunities" in the vicinity of the Project Site. DWR does not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted.

If legality is to be considered in the analysis, to maintain an apples-to-apples comparison, the calculated length of "available shoreline for fishing opportunities" impacted by the Project must be reduced to exclude shoreline that is currently being accessed illegally on the west side of Shag Slough. This revised calculation would reduce the amount of "available shoreline for fishing opportunities" the Project Site provides access to from 1.46 miles to 0.28 mile.⁸

Similarly, revising the amount of "available shoreline for fishing opportunities" identified in the region of the Project, as listed in Table IV.J-1 of the Revised EIR Final, to exclude areas where either access or fishing is clearly marked as illegal, where only boat-in access is allowed, or where legality is questionable (e.g., near private property) would reduce the amount of shoreline identified in the Revised Final EIR from 22.33 miles to 10.30 miles.⁹ As such, adding legality as a parameter in the definition of "available shoreline for fishing opportunities" suggests that the Project would reduce access to only 2.7% ((0.28/10.30)*100) of "available shoreline for fishing opportunities" within a 60-minute driving radius of the Project (as opposed to 6% presented in the Revised Final EIR). Excluding these areas from the analysis would not change the results or conclusions of the Revised Final EIR.

In response to comments regarding the legality of potential shoreline fishing locations identified in Table IV.J-1, DWR has made revisions to the Revised Final EIR to clarify that the potential shoreline fishing locations discussed are not formal sites, are not necessarily legal, and that DWR does not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted. The following page and paragraph numbers refer to the Revised Final EIR that was circulated to the public beginning June 1, 2023. These clarifying revisions do not change the results or conclusions of the Revised Final EIR.

Page IV.J-3, first paragraph, third full sentence, the following text was added: "... similar to the Proposed Project Site, where shoreline access requires crossing private lands."

⁸ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. Appendix A: Detailed Calculations of Available Shoreline for Fishing Opportunities.

Potential shoreline fishing locations listed in Table IV.J-1 were revisited with consideration of legality, boat-in access, and proximity to private property. The following sites (and the linear feet of available shoreline) were removed from the calculation: The Dairy (2,000 lf), The Patio (600 lf), Calhoun Cut Ecological Reserve (7,790 lf), The Barges (7,750 lf), Little Franks Tract (5,870 lf), Sacramento River Deep Water Ship Channel (2,560 lf), Egbert Cut (1,890 lf), Elk Slough (700 lf), Sacramento Drainage Canal (900 lf), Reclamation District 551 Borrow Canal (2,430), North Stone Lake (2,740 lf), Big Lake (3,550 lf), Main Canal (1,090 lf), Tule Canal (2,630 lf), Toe Drain (4,760 lf), Winchester Lake (4,370 lf), Prospect Island-Miner Slough (4,390 lf), Hastings Island (2,600), and Ryer Island (4.890 lf). This resulted in a total reduction of 63,510 lf (or 12.03 miles) of "available shoreline for fishing opportunities" in the vicinity of the Project, as compared to the 22.33 miles reported in the Revised Final EIR. This leaves 10.30 miles (22.33-12.03=10.30).

Page IV.J-3, first paragraph, last sentence, the following text was added: "...<u>(where local anglers discuss where they currently fish)</u>."

Page IV.J-4, first paragraph, first sentence was revised to delete the word "sites" and add the word "locations": "... <u>an additional 36 sites locations located within a 60-minute drive of the Proposed Project site.</u>"

Page IV.J-4, first paragraph, second sentence, the word "still" was deleted: "<u>While this</u> <u>list is still not exhaustive</u>..."

Page IV.J-4, first paragraph, second sentence, the following text was added: "...<u>and</u> identifies locations that may require fees or have other access restrictions..."

Page IV.J-4, first paragraph, second sentence, the word "available" was added: "<u>it</u> <u>provides a more complete context of the scale of available shoreline fishing</u> <u>opportunities</u>..."

Page IV.J-4, first paragraph, the following sentence was added at the end of the paragraph: "<u>DWR does not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted.</u>"

Page IV.J-4, second paragraph, second sentence, the following clarifications were made to the definition of "available shoreline for fishing opportunities": "... <u>shoreline that has</u> an absence of dense vegetation such that it will allow access to a fishing site and provides a realistic opportunity to fish (i.e., space for casting and recovery of fish); this definition was not limited by potential fee requirements or other access restrictions."

Pages IV.J-4 through IV.J-6, Table IV.J-1, the leftmost column was revised from "Facility" to "Location Name" to clarify that the potential shoreline fishing locations listed are not formal facilities.

Table IV.J-1, row one, a reference to footnote 2 was added to "The Dairy": "The Dairy²"

Table IV.J-1, row 19, a reference to footnote 2 was added to "The Patio": "The Patio²"

Table IV.J-1, row 21, a reference to footnote 2 was added to "<u>Calhoun Cut Ecological</u> <u>Reserve</u>": "<u>Calhoun Cut Ecological Reserve</u>2"

Table IV.J-1, row 29, a reference to footnote 2 was added to "<u>The Barges</u>": "<u>The Barges</u>²"

Table IV.J-1, row 31, a reference to footnote 2 was added to "<u>Little Franks Tract</u>": "<u>Little Franks Tract</u>": "<u>Little</u>

Table IV.J-1, row 36, a reference to footnote 2 was added to "Sacramento <u>River Deep</u> <u>Water Ship Channel</u>": "<u>Sacramento River Deep Water Ship Channel</u>2" Table IV.J-1, row 37, a reference to footnote 2 was added to "Egbert Cut": "Egbert Cut2"

Table IV.J-1, row 38, a reference to footnote 2 was added to "Elk Slough": "Elk Slough2"

Table IV.J-1, row 39, a reference to footnote 2 was added to "<u>Sacramento Drainage</u> <u>Canal</u>": "<u>Sacramento Drainage Canal</u>²"

Table IV.J-1, row 40, a reference to footnote 2 was added to "<u>Reclamation District 551</u> <u>Borrow Canal</u>": "<u>Reclamation District 551 Borrow Canal</u>2"

Table IV.J-1, row 41, a reference to footnote 2 was added to "<u>North Stone Lake</u>": "<u>North</u> <u>Stone Lake</u>²"

Table IV.J-1, row 42, a reference to footnote 2 was added to "Big Lake": "Big Lake²"

Table IV.J-1, row 43, a reference to footnote 2 was added to "<u>Main Canal</u>": "<u>Main</u> <u>Canal²</u>"

Table IV.J-1, row 44, a reference to footnote 2 was added to "Tule Canal": "Tule Canal²"

Table IV.J-1, row 45, a reference to footnote 2 was added to "Toe Drain": "Toe Drain²"

Table IV.J-1, row 46, a reference to footnote 2 was added to "<u>Winchester Lake</u>": "<u>Winchester Lake</u>2"

Table IV.J-1, row 49, a reference to footnote 2 was added to "<u>Prospect Island-Miner</u> <u>Slough</u>": "<u>Prospect Island-Miner Slough</u>2"

Table IV.J-1, row 53, a reference to footnote 2 was added to "<u>Hastings Island</u>": "<u>Hastings</u> <u>Island</u>²"

Table IV.J-1, row 55, a reference to footnote 2 was added to "<u>Ryer Island</u>": "<u>Ryer Island</u>": "<u>Ryer</u> <u>Island</u>2"

Page IV.J-6, Table IV.J-1, footnote 1, the first sentence was revised to delete the word "sites", and add the word "locations": "Shoreline fishing sites locations outlined in this table represent a limited sample of all shoreline fishing sites locations within a 60-minute drive of the Proposed Project Site"

Page IV.J-6, Table IV.J-1, footnote 1, the following sentence was added: "<u>These</u> <u>locations and their names were compiled using a variety of sources, including online</u> <u>forums (where local anglers discuss where they currently fish), regardless of potential fee</u> <u>requirements or access restrictions.</u>"

Page IV.J-6, Table IV.J-1, footnote 2 was added: <u>*This location may include access*</u> <u>restrictions (e.g., parking restrictions, boat-in access only, private land). DWR does not</u> condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted.

3.2 Consideration of Parking Availability in Assessment Methods

Some comments expressed concerns about the availability of parking at the potential shoreline fishing locations identified in Table IV.J-1 of the Revised Final EIR, as well as the resulting ease of pedestrian access; these comments include 2-2, 3-1, and 4-3.

As presented in DWR's Public Access Summary of the Project Site,¹⁰ on page 5, there is no existing designated parking, and visitors park their vehicles on the shoulder of Liberty Island Road. Based on Solano County regulations, parking is permissible on the east shoulder of Liberty Island Road but is illegal on the west shoulder of Liberty Island Road. Even though there is no designated parking, new paved turnaround areas will be provided as part of the Project and existing informal uses within the road right-of-way will continue on the portions of Liberty Island Road or the new turnaround areas will be required to comply with County regulations and rules, consistent with existing uses.

As stated previously, the Revised Final EIR defines "available shoreline for fishing opportunities" both on and off-site as "shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish." This definition does not consider the availability of formal parking facilities at the potential shoreline fishing locations presented in Table IV.J-1 of the Revised Final EIR, in part because no such facilities exist at the Project Site. Instead, the analysis identified potential shoreline fishing locations from a variety of sources, including the Delta Protection Commission's Inventory of Recreation Facilities in the Delta; the Delta Stewardship Council's Delta Plan; and CDFW, City, and County Parks Department webpages; as well as unofficial sources such as online angler's forums and crowd-sourced lists of fishing spots (where local anglers discuss where they currently fish).¹¹ In addition, in-person visitor surveys were conducted at the Project Site in September/October 2021.¹² Question 8 of the 2021 in-person visitor survey asked respondents if they fish in other locations in the Delta; the responses to this question were used to identify additional commonly known potential shoreline fishing locations within a 60-minute drive of the Project Site.

DWR used the methods outlined above, including publicly available online angler's forums where local anglers discuss where they currently fish, to identify commonly known locations with the potential for shoreline fishing to occur. In addition, desktop examination using Google Earth satellite imagery was conducted on each of the locations listed in Table IV.J-1 to filter for those

 ¹⁰ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021

 ¹¹ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta
Region.

¹² Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

that could be feasibly reached by foot from a nearby road providing informal parking opportunities (however, availability of parking immediately adjacent to a shoreline without walking was not considered a necessary parameter in defining a recreational *opportunity* to fish from a shoreline). As such, DWR determined that the Revised Final EIR provides an adequate, complete and good faith effort to evaluate the accessibility of potential shoreline fishing locations related to available parking and pedestrian access.

3.3 Concerns Related to 60-Minute Driving Radius

Some comments expressed concerns about the use of a 60-minute driving radius, which was used in the analysis to define the "local scale" within the broader Delta region when identifying potential shoreline fishing opportunities; these comments include 2-4 and 4-2.

"Threshold of Significance" in both the previously certified Final EIR and in the Revised Final EIR asks whether the Project would substantially decrease recreational opportunities to fish from the shoreline within the *Delta region* (emphasis added). Therefore, any reduction in access to shoreline fishing locations must be contextualized within the broader Delta region, defined in the analysis as the area within the legal boundary of the Delta.

To analyze a reasonable distance scenario, DWR chose to tighten the radius for identifying potential shoreline fishing locations to a "local scale," defined as a 60-minute driving radius around the Project Site.¹³ The 60-minute driving radius was derived from a 2014 California Department of Parks and Recreation statewide recreation survey, which found that the majority of recreationists in California travel between 21 and 60 minutes to the places they visit most often for recreation.¹⁴ This radius was discussed in the previously certified Final EIR, under Section 2.b and Impact 4.b.i. The Contra Costa Superior Court ruled that the previously certified Final EIR fully complied with CEQA outside of Impact 4.b.iii, and therefore it was reasonable to apply the same radius to define the "local scale."

However, it must be emphasized that all calculations presented in the Revised Final EIR related to the percentage of shoreline impacted by the Project in comparison to that available within a 60-minute driving radius is so conservative as to vastly overestimate the significance of the impact of the Project, because the threshold does not ask whether the Project would substantially decrease opportunities to fish from the shoreline within a 60-minute driving radius of the Project Site, but rather asks whether opportunities would be substantially decreased in the Delta region as a whole. Therefore, any change to decrease the driving radius in the analysis would have no impact on the significance conclusion in the Revised Final EIR.

¹³ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region

¹⁴ California State Parks, "Survey on Public Opinions and Attitudes on Outdoor Recreation in California," January 2014.

2.3 Comments Received and Individual Responses

The following pages present each comment letter received by DWR during the public review period for the Revised Final EIR, followed by individual responses to each commenter. The attachments/exhibits that were received with the comment letters are included as Appendix B to this Revised Final EIR.



YOCHA DEHE Cultural Resources

June 20, 2023

Department of Water Resources Fishing Restoration Program Attn: Ling Chu, 3500 Industrial Blvd 2nd Floor West Sacramento, CA 95691

RE: Lookout Slough Restoration Project YD-03252019-04

Dear Ms. Chu:

Thank you for your project notification letter dated June 2, 2023, regarding cultural information on or near the proposed Lookout Slough Restoration Project. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area and would like to continue to receive updates on the project.

Should you have any questions, please contact:

CRD Administrative Staff Yocha Dehe Wintun Nation Office: (530) 796-3400 Email: <u>THPO@yochadehe.gov</u>

Please refer to identification number YD – 03252019-04 in any correspondence concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

DocuSlaned by: honne perkins

Caddoobdooseede438... Tribal Historic Preservation Officer

Letter 1 Yocha Dehe Wintun Nation Response

1-1 The commenter will be notified of any updates to the Project.



tel: 916.455.7300 · fax: 916.244.7300 510 8th Street · Sacramento, CA 95814

July 17, 2023

<u>SENT VIA EMAIL</u>: Ling-ru.Chu@water.ca.gov

Department of Water Resources Fish Restoration Program Attention: Ling Chu 3500 Industrial Boulevard, 2nd Floor West Sacramento, California 95691

Re: Comments on the Partially Recirculated Draft Environmental Impact Report for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project

Dear Ling Chu:

These comments on the June 2023 Partially Recirculated Draft Environmental Impact Report ("PRDEIR") 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 Central Delta Water Agency ("CDWA"). In general, CDWA supports well-planned Delta restoration activities but impacts on recreation must be fully disclosed as required by CEQA in order for an EIR to function as an informational document. (*Laurel Heights Improvement Association v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 402-03 [EIR's ability to function as an informational document for meaningful decision making is a "fundamental goal" of CEQA].)

The Superior Court of Contra Costa County determined that the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Final Environmental Impact Report ("FEIR") was deficient. The court found "that the Project will result in the loss of 3 miles of shoreline fishing. The information available in the DEIR shows that the loss of 3 miles of shoreline fishing would be a significant impact and the EIR's conclusion to the contrary was not supported by substantial evidence. Respondent failed to properly consider that Project's impact on opportunities to fish from the shoreline within the Delta region. Therefore, Respondents must re-consider this issue." (Judge Edward G. Weil's November 17, 2022, Statement of Decision, p. 24.¹)

1

2-1

The court's Statement of Decision is attached hereto as Exhibit 1.

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In an attempt to rectify the deficiency in the FEIR identified by the court, DWR produced the PRDEIR. However, the PRDEIR comes to the same conclusion as the previously decertified FEIR (that loss of 3 miles of shoreline fishing would not be a significant impact on recreation) without including substantial evidence that supports that conclusion. New information in the PRDEIR can be summarized as follows:

- The project would eliminate 1.46 miles of "available shoreline for fishing opportunities."
- Within an hour's drive of the project, there is a total of 22.33 miles of "available shoreline for fishing opportunities."
- Therefore, the reduction in access caused by the project would be roughly six percent of all available shoreline fishing opportunities.

(PRDEIR, p. IV.J-12.)

Based on this information, the PRDEIR determines that the amount of shoreline fishing opportunities removed by the project is so minimal that it does not exceed the EIR's threshold of significance. (PRDEIR, pp. IV. J-13-14.) The applicable threshold in the PRDEIR, which is unchanged from the FEIR, is whether the project would "substantially decrease opportunities to fish from the shoreline within the Delta region." (PRDEIR, p. IV.J-7.) While DWR has provided additional information regarding the potential for other shoreline fishing locations in the Delta, the PRDEIR fails to include substantial evidence to support the conclusion that the project's impact would be less than significant.

I. <u>The PRDEIR Fails to Disclose the Limitations of Purported Alternative Shore</u> <u>Fishing Opportunities</u>

The PRDEIR's conclusion regarding the substantiality of the reductions in shoreline fishing opportunities due to the project is not supported by substantial evidence, and the information provided in the recirculated PRDEIR also overestimates the availability of alternative fishing locations.

A. The PRDEIR Fails to Consider Availability of Parking at Places where Shoreline Fishing May be Possible

The PRDEIR's analysis fails to consider the need for members of the public to park their cars when fishing from the shoreline. The lack of parking information is particularly relevant because the locations may take upwards of 60 minutes to reach from the project site. Most locations are inaccessible by public transportation or bicycle, making parking a necessity. For the public to understand the project's impacts on 2-1 (Cont) Department of Water Resources July 17, 2023 Page 3 of 11

recreation, the PRDEIR must provide information on parking availability at the shoreline locations. Areas that do not provide necessary parking, or have only very limited parking, may bar individuals from fishing at those locations. By failing to consider this information, the PRDEIR overstates available alternative shoreline fishing opportunities.

Both Shag Slough and Liberty Island Ecological Reserve ("LIER") are easily accessible by walking from the east side of Liberty Island Road, where the PRDEIR points out there are 1.5 miles worth of opportunities to fish from the shoreline (PRDEIR, p. IV.J-9.) Liberty Island Road provides approximately 1.5 miles of legal parking along the east side of the road. DWR clarified the availability of legal parking in its Public Access Summary 2.1.3. The summary states that "[d]uring stakeholder outreach, Solano County indicated that parking is permissible along the shoulders of County roadways as long as there is no posted signage indicating otherwise." (Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Public Access Summary, p. 5.)² The only signage at Shag Slough that indicates "No Parking" is with respect to parking on or adjacent to the Shag Slough bridge, leaving 1.5 miles of parking (approximately 440 parking spaces, 18 feet in length) available for easy access to shoreline fishing.³ This demonstrates that Shag Slough and LIER provide a significant proportion of the region's capacity for shoreline fishing because of the combination of legal parking and accessible shoreline.

The same cannot be said for several of the allegedly available alternative shoreline fishing locations identified in the PRDEIR. Several locations listed in the PRDEIR prohibit parking. For example, Figure 1 below shows restrictions on parking at "Winchester Lake" in Yolo County. The PRDEIR claims this location would provide 4,370 feet of shoreline access for fishing opportunities. (PRDEIR, p. IV.J-6.) However, as seen in the image, the signage explicitly prohibits parking. Figure 2 shows alleged fishing opportunities at "Ryer Island." The PRDEIR indicates that this location provides 4,890 feet of shoreline access. (PRDEIR, p. IV.J-6.) However, the sign in the photo below makes clear that Ryer Island is private property and does not allow parking or fishing.

Together, these two examples indicate that the 22.33 miles of available shoreline claimed in the PRDEIR overestimate roughly 1.75 miles of alternative shoreline fishing alternatives. There are likely other examples that further decrease the 22.33-mile figure

2-2 (Cont)

² Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Public Access Summary is attached as <u>Exhibit 2</u>.

³ Solano County Site Development and Other Standards, Article IV § 28.94(C)(3) "Parking Requirements" <u>https://solanocounty.com/civicax/filebank/blobdload.aspx?</u> <u>blobid=13400</u> (requiring the length of parking spaces to be 18 feet).

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claimed in the PRDEIR. The PRDEIR is informationally deficient because it fails to accurately depict recreation impacts from the project. DWR must address this deficiency by providing the public and decisionmakers with meaningful information upon which to base decisions regarding the project. (See *Laurel Heights Improvement Association v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 402-03.)



Figure 1. Sign at "Winchester Lake" prohibiting fishing access.

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Figure 2. Sign at Ryer Island prohibiting fishing access.

B. The PRDEIR Also Fails to Identify the Legality of the Access at the Possible Recreation Locations

As explained above, the PRDEIR is informationally deficient because it does not analyze whether the locations can be legally accessed once they have been reached. The figures below demonstrate other barriers to accessing the shorelines identified in the PRDEIR.

Figure 3 shows a "No Trespassing" sign at Calhoun Cut Ecological Reserve, making it inaccessible for foot traffic. Further, per the Department of Fish and Wildlife's website, Calhoun Cut is accessible only by boat.⁴ Therefore, the PRDEIR overestimates the availability of 7,790 linear feet of shoreline fishing at the Calhoun Cut Ecological Reserve site. (PRDEIR, p. IV.J-5.) 2-3

2-2

(Cont)

⁴ Department of Fish and Wildlife, Calhoun Cut Ecological Reserve (June 5, 2023), <u>https://wildlife.ca.gov/Lands/Places-to-Visit/Calhoun-Cut-ER</u> (last visited July 8, 2023).

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Figure 3. Depiction of Calhoun Cut Ecological Reserve showing boat access only and a "No Trespassing" sign at the site.

2-3 (Cont)

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2-3

Figure 4. Signs at "The Dairy" prohibiting access and a Google Map depiction of the location of the signs.

Figures 1 through 4 demonstrate the PRDEIR's failure to provide information to the public regarding the availability of alternative shoreline fishing opportunities in the area. These are only a handful of examples that are not legally accessible for fishing. Figures 1 through 4 alone, which are just examples, show that the PRDEIR overestimated at least 19,050 linear feet or 3.61 miles of shoreline fishing. These examples shorten the available shoreline length from 22.33 miles to 18.72 miles. This adjustment alone makes the loss of shoreline fishing due to the project closer to eight percent of the total available Delta shoreline fishing.

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C. The PRDEIR Overstates Shoreline Fishing Opportunities Available to the Individuals That Use the Site

The reductions in shoreline fishing locations discussed above help illustrate the Department of Fish and Wildlife's concerns regarding the already limited access to fishing opportunities in the Cache Slough Complex because most levees are on private property or have restricted access. (Judge Edward G. Weil's November 17, 2022, Statement of Decision, p. 23.) Further, this exacerbates the impact that will be felt by individuals who rely on pedestrian access, which has a disproportional effect "on lower income individuals who cannot afford boats." (*Ibid.*) DWR's use of the maximum driving minutes (a 60-minute radius) fails to properly weigh the equity imbalances created by asking low-income individuals to travel longer distances to find an adequate substitute for Shag Slough and LIER. Additionally, while the origin location of most users is not certain, the closure of fishing in the project area would likely disproportionately impact recreationists that live west of the Delta.

The PRDEIR indicates that DWR chose the 60-minute radius standard by relying on the California Department of Parks and Recreation's 2014 statewide recreation survey. (PRDEIR, p. IV.J-9.) The survey indicated that a "plurality of recreationists in California travel between 21 to 60 minutes" for recreation opportunities. (PRDEIR, p. IV.J-9.) However, the PRDEIR does not justify using a 60-minute radius rather than a shorter time period. The use of the 60-minute radius is also undermined by the demographic and likely origin of individuals most likely to use the project site.

There are two reasons the 60-minute maximum likely overstates the number of alternative locations available for individuals that use the project site for shoreline fishing. First, the PRDEIR does not explain why it chose to use the higher end of the statewide survey results (i.e., 60-minute travel time instead of 21-minute travel time). Further, the survey was based on a statewide recreation survey. The use of statewide data is unhelpful in determining the length of travel individuals in or near the Delta are willing to travel. Therefore, the PRDEIR should use localized data that better supports the assertion that individuals currently using the site are willing to drive an hour to recreate at a different site. Using a 60-minute travel time likely overstates the number of alternative shoreline fishing locations available to individuals using the project site.

Second, the PRDEIR ignores the likely origins of the project site's users. Where people live is important because it is likely that many of those using the site travel from west of the Delta, making alternatives further east less likely to be pursued. The answers provided to DWR's 2021 on-site survey indicate that most users of the project area come

2-4

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from areas to the west.⁵ For example, one of DWR's questions asked, "Do you go to any other areas in the Delta to participate in the following activities?" (Exhibit 3, p. 5.) The top five answers were: Rio Vista (28), Grizzly Island (22), Suisan Bay/Marsh (18), Lake Berryessa (6), and Isleton (6). (Exhibit 3, p. 5.) These answers indicates that the individuals surveyed at the site likely travel from areas west of the Delta, such as Dixon, Vacaville, and Fairfield. DWR's survey shows that individuals using the site are less likely to travel east of Rio Vista. Therefore, several of the alternatives provided in the PRDEIR would not be viable alternatives for those using the site for shoreline fishing.

The PRDEIR's use of a 60-minute travel time and the lack of information about the individuals that recreate at the project site likely further overestimates the available shoreline that would be accessible to users of the project area. The PRDEIR's overestimation of alternative available fishing locations inaccurately depicts the extent of the project's impact.

II. <u>Substantial Evidence Does Not Support the Conclusion That a Six Percent</u> <u>Decrease Is Not Substantial</u>

As described in previous sections, the total amount of available shoreline fishing opportunities is overstated. Additionally, the information provided in the PRDEIR is not substantial evidence that the project would not "substantially decrease opportunities to fish from the shoreline within the Delta region." (PRDEIR, p. IV.J-7.) Although the PRDEIR points to other areas that could be accessible to shoreline fishing, it fails to provide evidence that a six percent⁶ decrease in overall fishing opportunities is not a substantial decrease.

CEQA Guidelines define "substantial evidence" as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines, § 15384, subd. (a).)

Based on the new information in the PRDEIR, it concludes that "The loss of shoreline fishing for pedestrians at the Reserve is small in comparison to other opportunities in the Delta for fishing from a shoreline or pier. Therefore, impacts of the Proposed Project would not exceed the applicable threshold of significance related to a decrease in opportunities to fish from the shoreline within the Delta region and the 2-4 (Cont)

2-5

⁵ PRDEIR Attachment 2E: Additional Detailed Results from On-Site Visitor Surveys is attached here as <u>Exhibit 3</u>.

⁶ Due to the overstated ability to use areas throughout the Delta, the six percent decrease is closer to eight percent, if not more.

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Proposed Project's impact with regard to this threshold would be *less than significant*." (PRDEIR, p. IV.J-14 [original emphasis].

However, the PRDEIR fails to explain how a six percent decrease is "small" or insignificant in the relevant context of shoreline fishing. For an EIR to be sufficient as an informational document, the EIR must include the analytical pathway taken by the lead agency bridging the gap between the "raw evidence and ultimate decision." (See *Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal. 3d 506, 515.) The PRDEIR fails to provide this analytical pathway. In fact, the new information provided in the PRDEIR indicates that the loss of shoreline fishing opportunities at the project site is significant.

The PRDEIR lists 54 sites that provide available shorelines for fishing opportunities. (PRDEIR, pp. IV.J-4 – 6.) The total shoreline mileage of these 54 sites is 22.33 miles, averaging roughly 0.4 miles per site. The project, however, would remove one site that is more than *three times* that average. (PRDEIR, p. IV.J-12.) Further illustrating the significance of the project's impact is the amount of shoreline fishing opportunities being impacted compared to the size of other areas. The project would cut off 7,708 feet of shoreline available for fishing. Only three of the 54 sites discussed in the PRDEIR provide the same or more shoreline at one site.⁷ (PRDEIR, pp. IV.J-4 – 6.)

Therefore, substantial evidence does not support the conclusory statement that a six percent decrease in fishing opportunities is "small in comparison" to other Delta opportunities. The loss of this large fishing area on the west side of the Delta, which also provides ample parking, is a significant impact on recreation that should be disclosed and mitigated. The new information provided by the PRDEIR is not substantial evidence that this impact is less than significant.

2-5 (Cont)

⁷ Of the three sites listed, two do not provide opportunities to fish from the shoreline in the same manner as the project location. Access to the "The Barges" appears to requires a special permit (see link available at

https://earth.google.com/web/search/Eddo%27s+harbor+and+RV+park/@38.04286482,-121.69095143,1.43738329a,0d,60y,307.83170152h,89.59245568t,0r/data=CoQBGloSV AolMHg4MDg1NTQxNDZhODJlZjkzOjB4YjQyN2Y1NWRINWI1ODhiZhkOHyJ_egZ DQCH7qZYZ22xewCoZRWRkbydzIGhhcmJvciBhbmQgUlYgcGFyaxgBIAEiJgokCS5 9hRg1AzVAESx9hRg1AzXAGWJKa87fmUFAIXd89bHV7FDAIhoKFnJBU19FQ24yd WRWZ2dRRmdfa01kOFEQAjoDCgEw?authuser=0) and "Calhoun Cut Ecological Reserve" is accessible only by water craft, as explained above.

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III. <u>CONCLUSION</u>

The PRDEIR fails to perform its duty as an informational document, and its conclusion that the project's recreation impact is less than significant is not supported by substantial evidence. We request that DWR recirculate the PRDEIR to address the concerns raised herein. Thank you for considering the comments.

Very truly yours,

SOLURI MESERVE

A Law Corporation By:

Osha R. Meserve

Attachments:

- Exhibit 1 November 18, 2022, Statement of Decision regarding *City of Vallejo et al. v. California Department of Water Resources*, Contra Costa County Superior Court, Case No. MSN21-0558
- Exhibit 2 Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Public Access Summary
- Exhibit 3 PRDEIR Attachment 2E: Additional Detailed Results from On-Site Visitor Surveys

2-6

Three exhibits were submitted to accompany the comment letter from the Central Delta Water Agency. These exhibits are included as Appendix B-1, B-2, and B-3, respectively, to this Revised Final EIR.

Letter 2 Central Delta Water Agency Response

2-1 The comment asserts that DWR came to the same conclusion in the Revised Final EIR without providing substantial evidence to support that the Project would not result in a substantial decrease in opportunities to fish from the shoreline within the Delta region.

As presented in Global Response 1: Purpose and Scope of the Revised Final EIR, the Revised Final EIR (Section IVJ. Recreation) includes revisions amplifying and clarifying the previous analysis as directed by the Court. As discussed in Global Response 2: Substantial Evidence, determining whether a project may have a significant effect on the environment is "based on substantial evidence in light of the whole record" (CEQA Section 21082.2(a)). Furthermore, as stated in CEQA Guidelines Section 15151, an EIR should be prepared with a sufficient degree of analysis to provide decision makers (in this case DWR) with information that will enable a decision to be made that intelligently takes account of environmental consequences. While an evaluation of the environmental effects of a proposed project need not be exhaustive, additional facts, evidence and analysis was gathered and conducted; and new research was undertaken to augment and validate the amount of shoreline that provides opportunities for fishing, as presented in Table IV.J-1: Sample of Available Shoreline at Shoreline Fishing and Pier Fishing Locations within a 60-minute Drive of the Project Site (pages IV.J-4 and IV.J-5 of the Revised Final EIR). Additionally, a thorough review of publicly available information, including but not limited to websites, online forums, and videos was also undertaken. The new information and analysis should be viewed in the context that the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information and analysis provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region.

See also Responses 2-2 through 2-5.

2-2 The comment asserts that the Revised Final EIR fails to consider the need for members of the public to have available parking to access shoreline fishing opportunities in the Delta and at the Project Site.

To evaluate Impact 2.a.iii, *Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region*, the Revised Final EIR (page IV.J-4) defines "available shoreline for fishing opportunities" both on and off-site as "shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish." This definition does not consider the availability of formal parking facilities at the potential shoreline fishing locations presented in Table IV.J-1 of the Revised Final EIR, because

no such facilities exist at the Project Site and therefore will not be impacted by Project implementation. See **Global Response 3: Methods of Analysis** for additional discussion of how the analysis included a complete and good faith effort to review potential shoreline fishing opportunities for proximity to informal parking along nearby roadways.

See also **Global Response 2: Substantial Evidence**. The analysis in the EIR is prepared by experts based on scientific and factual data. CEQA allows for differences of opinion with respect to environmental issues addressed in an EIR. As Section 15151 of the CEQA Guidelines states, even "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. Perfection is not required, but the EIR must be adequate, complete and a good faith effort at full disclosure (CEQA Guidelines Section 15151)."

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Taking into consideration the accessibility of each location (which includes allowable parking, as defined in **Global Response 3: Methods of Analysis**) would not change the conclusions in the Revised Final EIR.

2-3 The comment asserts that the Revised Final EIR is deficient because it fails to identify the legality of access at places where shoreline fishing may be possible and therefore, the analysis overestimates the amount of available shoreline fishing opportunities. The comment concludes that if legal access was considered that the available shoreline for fishing opportunities would be 18.72 miles instead of 22.33 miles, and that this would represent a loss of shoreline fishing due to the Project closer to eight percent of the total available Delta shoreline fishing.

Available shoreline is defined on page IV.J-4 of the Revised Final EIR, as "shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish". While DWR does not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted, DWR did not define "available shoreline for fishing opportunities" for the purpose of the analysis as being legally accessible to fishing, as defined in the comment.

The total length of available shoreline presented in Table IV.J-4 of 22.23 miles does not represent all potential available Delta shoreline fishing opportunities. As described in Subsection 2.b (Environmental Setting, Regional Recreation) of the Revised Final EIR, a variety of sources were searched to identify commonly known locations with the potential for shoreline fishing to occur within a 60-minute driving radius of the Project Site, which are presented in Table IV.J-1. As stated on page IV.J-4, the list of locations included in Table IV.J-1 is not exhaustive, and it includes locations that may require fees or have other access restrictions; but, it is intended to provide a more complete context of
the scale of "available shoreline for fishing opportunities" in the vicinity of the Project Site.

The method of analysis to evaluate Impact 2.a.iii, *Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region*, did not differentiate whether potential shoreline fishing opportunities could be legally accessed at the Project Site or within a 60-minute drive of the Project Site because DWR similarly does not distinguish between the removal of legal shoreline fishing opportunities and illegal shoreline fishing opportunities on the Project Site; rather, DWR's analysis treats both equally. If legality is to be considered in the analysis (both on the Project Site and within the local region), the calculated amount of "available shoreline for fishing opportunities" removed by the Project would decrease from 6% (as reported in the Revised Final EIR) to 2.4%, as outlined in **Global Response 3: Methods of Analysis**. This Global Response also provides further discussion of how the analysis in the Revised Final EIR presented a complete and good faith effort to accurately contextualize the amount of "available shoreline for fishing opportunities" impacted by the Project with that available in the region and identifies text changes made to the Revised Final EIR that clarify issues of illegal fishing access.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Taking into consideration legal access to fishing opportunities would not change the conclusions in the Revised Final EIR.

2-4 The comment expresses concern over how the reduction of fishing in the Project area would likely disproportionately impact recreationists that reside west of the Delta.

Under CEQA, economic or social effects of a project shall not be treated as significant effects on the environment unless they cause a physical effect (CEQA Guidelines Section 15131). Lead agencies are only required to analyze potentially significant adverse impacts of a project to the physical environment. The term "environment" means "the physical conditions which exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance... The 'environment' includes both natural and manmade conditions" (CEQA Guidelines Section 15360). Potential effects from implementing a project that are solely social or economic in nature, such as the demographics of persons who recreate in the Delta and/or use the Project Site for fishing opportunities, would not constitute an impact to the physical environment.

The use of the 60-minute radius in the Revised Final EIR is described in **Global Response 3: Methods of Analysis**. In addition, as described in Response 2-3, the list of locations with "available shoreline for fishing opportunities" within a 60-minute driving radius of the Project Site presented in Table IV.J-1 is not exhaustive, and it identifies locations regardless of potential fee requirements or access restrictions; but, it is intended to provide a more complete context of the scale of "available shoreline for fishing opportunities" in the vicinity of the Project Site.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Taking into consideration the origin of individuals that recreate at the Project Site would not change the conclusions in the Revised Final EIR.

2-5 The comment asserts that DWR has not provided evidence that a six percent decrease in overall fishing opportunities in the Delta region is not significant.

As stated on page IV.J-7 of the Revised Final EIR, DWR, as the Lead Agency for the Project, added a significance threshold to evaluate the Project's potential to substantially decrease opportunities to fish from the shoreline in the Delta region.

In compliance with CEQA Guidelines Section 15064(b), DWR used careful judgment based on scientific and factual data in determining whether the Project would result in a significant impact due to "substantially decreas[ing] opportunities to fish from the shoreline in the Delta region". As required under CEQA Guidelines Section 15064(b)(2), DWR has explained how compliance with this threshold means that the Project's impacts are less than significant under *Impact iii. Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region*, on pages IV.J-8 through IV.J-14 of the Revised Final EIR.

See **Global Response 2: Substantial Evidence**. The analysis in the Revised Final EIR is prepared by experts based on scientific and factual data. CEQA permits disagreements of opinion with respect to environmental issues addressed in an EIR. As Section 15151 of the CEQA Guidelines states, even "[d]isagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. Perfection is not required, but the EIR must be adequate, complete and a good faith effort at full disclosure (CEQA Guidelines Section 15151).

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in this Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region.

2-6 See Responses 2-1 through 2-5.

Comments on revised Lookout Slough EIR

Liberty Island Access (LIA) has reviewed the revisions to the Lookout Slough Project EIR subsection on Recreation. Through its review, LIA has identified several problems in both the reasoning and the logic used to draw conclusions on recreation impacts.

Parking is the bottleneck, not linear feet of shoreline

The project has a distinct impact on users who do not have a boat, specifically bank fishers. Because of this, the impacted bank fishers rely on (a bare minimum) of two things in order to continue to fish as they've done historically in the immediate region for generations; (1) legal and suitable shoreline to cast a fishing line from; (2) legal and suitable parking.

The EIR's analysis only measures one of these issues; linear feet of shoreline "available" for bank fishing. The EIR's analysis is a gross oversimplification. The analysis ignores the fact that the capacity for bank fishing in the region is not constrained by "available shoreline", but by available parking, which is a prerequisite for access in an area devoid of bike lanes or public transit. Shag Slough and LIER are unique in that parking is plentiful at the site (Fig 1), with virtually all of it being removed by the Lookout Slough project. DWR's own documentation shows the project would remove approximately 1.5 miles of legal parking along the eastern side of Liberty Island Road.



Fig 1: Liberty Island Road looking north from the Shag Slough Bridge, Oct 2021. Over 22 (mostly large) vehicles can be seen in this picture. More cars were parked out of view, further down the road closer to other fishing access points.

DWR has clarified the legality of parking in this area in its recent study on the issue:

"During stakeholder outreach, Solano County indicated that parking is permissible along the shoulders of County roadways as long as there is no posted signage indicating otherwise"

Solano County Ordinance No. 521, passed in 1962, makes it unlawful for any vehicle to park at any time, "on the west side of Liberty Island Road from the Liberty Island Bridge to a point 1.5 miles north thereof"¹

Because the only "No Parking" signage is with respect to parking immediately on or adjacent to the Shag Slough bridge, that leaves over 1.5 miles of generous road shoulder that can hold 360 parking spots (each 22ft in length, the nominal length of a parallel parking space²). By comparison, DWR only intends to replace approximately 16 parking spaces, reducing parking by more than 95%. Furthermore, since DWR is creating a new boat ramp at the site, it may be expected that an *increase* in other recreational users, especially vehicles with trailers for kayaks, will be competing with bank fishers for these limited 16 parking spots. A more accurate metric that should be considered when evaluating the project's impacts on shoreline fishing is nearby *bank fishing capacity*, to accept the displaced bank fishers. This metric is truly limited by parking, not feet of shoreline. For this reason, DWR's analysis is inappropriate for the purposes of evaluating recreation impacts related to bank fishing.

Many of the locations DWR references, while having a large amount of shoreline, have a very low capacity because only a few cars can be parked at those sites. Shag Slough and Liberty Island provide a significant proportion of the region's capacity for bank fishing, because of the unique combination of plentiful parking and accessible shoreline. The vast majority of the sites DWR identified have extremely limited parking, with dubious legality and safety (see Figures 2a, 2b, and 2c). When we perform a cursory inspection of the parking capacity of all the other locations that DWR has listed, we find that a large portion of bank fishing capacity is found at just Shag Slough/Liberty Island and Brannan Island State Park. We approximate that about 30% of regional bank fishing capacity would be lost with the current Lookout Slough Project design. Furthermore, because of the uneven distribution of parking capacity, if Brannan Island State Park also closes (as it did in 2011³ and 2022⁴), then the impact of the Lookout Slough Project would mean ~40% reduction in regional bank fishing capacity.

³<u>https://www.recordnet.com/story/news/2011/05/14/budget-cuts-will-close-fourth/50034769007/</u>

¹ Attachment 4_508, Public Access Summary 2.1.3

²<u>https://www.acgov.org/cda/planning/landuseprojects/documents/Draft_Design_Guidelines_Standards_Ch_6-01-29-10.pdf</u>

⁴ <u>http://parks.ca.gov/NewsRelease/1071</u>



Fig 2a. "The Dump gate" fishing access location, claimed by DWR for 600 ft of "available shoreline". Safe parking capacity of ~2-3 vehicles.



Fig 2b. "The Power Lines" bank fishing location, claimed by DWR for 2000 ft of "available" shoreline. However, only approximately ~4-6 vehicles can safely park here.

3-1 (Cont)



Fig 2c: "Little Franks Tract" bank fishing access point right before turn around / gates. Claimed by DWR for 5870 ft of "available" shoreline. Parking (of dubious legality) with a capacity of 2-4 vehicles.

DWR uses apples-to-oranges comparison

DWR's revised studies attempt to show that the project has an insignificant impact on the bank fishing users who currently drive to Shag Slough and Liberty Island Ecological Reserve (LIER), and then walk to a shoreline fishing location to fish. To illustrate this point, the EIR attempts to quantify both the shoreline that would be lost, and the shoreline that is still available in the region. While the length of available shoreline is not the primary constraint on bank fishing access, DWR still grossly inflates the amount of equivalent shoreline length in the region. Shag Slough and LIER provide ample parking along the east side of Liberty Island Road (LIR), and legal pedestrian access to shoreline fishing spots. DWR's study does not at all recognize those key access distinctions, and inappropriately considers areas that are either closed to public access, don't have pedestrian access, or lack parking entirely. By including these areas, DWR grossly underestimates the percentage of shoreline available to bank fishing that would be lost.

DWR neglects to perform even cursory verification of "data"

Despite being a multi-billion dollar state agency, DWR has fallen victim to building its arguments around speculative and factually erroneous claims, in order to promulgate a myth of plentiful, legal, bank fishing access in the California Delta. In a recent study, DWR repeated an erroneous claim that

"...one can fish from the shore by walking almost any levee one can find",

3-1 (Cont)

citing an internet forum webpage as the source. A closer inspection of this webpage (Fig 3) shows the comments that likely incited DWR to make this claim:

"park your car and bring a bike. fish until someone says you can't fish there, then keep fishing there. you'll run into fish eventually...."



"jersey is a good place to start. anywhere a levee has a road on it."

Fig 3. Internet forum page used as a source for the claim that alternate bank fishing sites are plentiful.⁵

DWR further tries to support a myth of proliferate bank fishing access by sharing a claim from a single respondent to one of its surveys stating that they fish *"everywhere in the Delta"*, even with no indication whether this person uses a boat or not. It is astonishing that an EIR for a multi-million-dollar project is making conclusions about recreation impacts based on misguided claims from internet forums and cherry-picked comments from surveys without any supporting evidence. The project site is very popular because it offers three things that are deficient in much of the Delta region; sufficient and safe parking, legal pedestrian access, and quality fishing opportunities. The revised analysis makes the misguided assumption that these factors are equally true for the identified "crowd-sourced" fishing locations. However, DWR's analysis does not attempt to verify whether any of the claimed fishing locations are legally accessible, or even physically accessible without a watercraft.

Even the most cursory review of the "available" bank fishing sites that DWR references show that many are posted as illegal. These include examples of access sites that require access to either private land or through private easements, such as "Ulatis Creek", "Alamo Creek", and "Hastings Island". Many locations can be shown to prohibit access by simply reviewing recent Google Street View imagery (see Figures 4,5,6,7,8).

3-2 (Cont)

⁵ https://www.westernbass.com/forum/bank-fishing-the-delta-t115991.html



Fig 4. "Winchester Lake", claimed for 4370 ft of access, clearly has signage stating no fishing from levees.



3-2 (Cont) **Fig 5**. "Ryer Island", claimed for 4890 ft of access, is clearly private property and does not allow fishing.



Fig 6. "Calhoun Cut", claimed for 7790 ft of access, clearly prohibits land based access (to prevent ecological damage).





that are signed to prohibit such activity.



Fig 8. "The Barges", claimed for **7750** ft of access, clearly shows signage at the access road stating fishing "by special permit only".

DWR utilizes irrelevant metrics that muddle its analysis

DWR issued studies on "available shoreline", as well as "total shoreline" in the surrounding region, but the latter metric is truly irrelevant to demonstrating impacts on bank fishing. This would be equivalent to measuring all roads, including freeways and highways, when trying to gauge the impact of a project that removes a bike lane. Including those types of roads would not make sense, since a bicycle would never be able to legally or safely use them. Analogously, DWR's "total shoreline" includes many private islands with no road access, and private levees that have clear signage prohibiting public access. Bank fishers that can currently drive to and fish legally at Shag Slough and LIER do not care about 100's of miles of shoreline they cannot practically or legally access. Including these illegal and and physically prohibited access points in the revised study is irrelevant to the project's significant impacts on the existing recreational uses.

DWR continues to recycle disproven logic and data

In 2021, the Lookout Slough Project was brought before the Delta Stewardship Council (DSC), for an appeal of its consistency certification. The DSC remanded the matter back to DWR because of a clear lack of Best Available Science for drawing unsupported conclusions about recreation impacts. A key point of evidence was the use of a single census tract to estimate the population in the immediate area of the project, and utilizing this data to make claims of insignificant impacts on bank fishing. The DSC certification process showcased the sloppiness of DWR's use of Best Available Science, as the project site can be shown to reside in not one, but two census tracts, as the census tract boundary transects the project site. Furthermore, DWR interviewed Subject Matter Experts (SME's) in the fall of 2021, who told them:

"don't use population (Census tract) data",

"Use of census data to estimate recreation use for the Lookout Slough project is not recommended. "it's a terrible idea." ⁶

This gross oversight was a key reason for the DSC's decision to remand the project. Despite this, DWR is now reintroducing this faulty argument⁷, demonstrating yet again, a jarring lack of attention to detail and sloppy disregard for thoughtfully considering recreation access. How can this EIR revision be accepted as sufficient if their own subject matter experts have clearly expressed that their methodology is wholly inappropriate?

DWR virtually ignores its own in-person survey for the revised EIR

Despite being the most relevant data that DWR has collected related to recreation at the project site, DWR has largely ignored the results of their own survey.

For example, in September, 10.8% of the visitors surveyed were first-time visitors, and in October the number jumped to 14.7% ⁸. These data points suggest approximately 524-713 new recreational visitors were observed during the study period (based on 1.97 visitors per vehicle, the average measured in LIA's onsite survey, since DWR failed to record this metric). DWR's study states that about 80% of visitors participated in fishing⁹, suggesting that about 419-570 first-time fishing users visited just during the survey period alone, or about 1865-2537 new fishing users a year. DWR's study observed that only 3.9% of vehicles were carrying watercraft, which suggests that the majority of fishing use is shoreline based ¹⁰. If we generously assume that DWR's study missed two watercraft for every one that was observed, that would still suggest that 88% of fishing use was shoreline based, and that 1641-2233 new bank fishing users visited per year. Therefore, the number of new bank fishing users per year is roughly 20

3-4 (Cont)

⁶ Attachment 2B_508: SME Interview Notes

² Lookout Slough Revised Final EIR, IV.J Recreation, Section 4bi

⁸ Attachment 2E, Table 17

⁹ Attachment 1, pg 10

¹⁰ Attachment 2, Table 13

times more than the total of 80 bank fishing individuals that DWR based their assumption of insignificance on¹¹. Even by just counting first-time visitors only, DWR's new study shows that their original estimate was off by at least an order of magnitude. If we more realistically include the regular and semi-regular visitors in the total number of unique visitors, these numbers climb even higher. DWR's recreational use survey that the original assumption of only 80 bank fishing individuals is completely invalid, and they fail to mention their own more recent survey that clearly identifies this discrepancy.

Conclusions

We have serious concerns with the methodology and assumptions used by DWR in this revised recreation impact document. Failing to recognize that bank fishing access is intrinsically correlated with parking access is a fatal flaw in the analysis. However, we are not surprised at this, since DWR has repeatedly ignored suggestions to provide suitable parking at the proposed project site.

Failing to consider the legality of access to many of the identified sites allowed DWR to grossly inflate the amount of shoreline available for bank fishing. DWR did not inspect the veracity of its so-called "data", much of which is based on dubious claims made in internet forums and YouTube videos. We show in our examples that even cursory inspection quickly rules out a significant amount of the shoreline they claim as being "available" for bank fishing.

Additionally, DWR failed to use this revision opportunity to amend its analysis with respect to recreation impacts from dispersion to other sites, and again, inappropriately rely on census data to make its conclusion. DWR's own documentation from the DSC appeal hearings clearly highlights the inappropriateness of the methodology used. LIA disagrees with DWRs exceedingly sloppy analysis, which fails to make the corrections identified by the Superior Court. Thus the chapter must be revised and recirculated for public review.

3-4 (Cont

¹¹ Lookout Slough Revised Final EIR, IV.J Recreation, Section 4bi

Five exhibits were submitted to accompany the comment letter from the Liberty Island Access group. These exhibits are included as Appendix B-4 through B-8, respectively, to this Revised Final EIR.

Letter 3 Liberty Island Access Response

3-1 The comment asserts that access to shoreline fishing opportunities is limited by available parking and that parking is plentiful at the Project Site, which will be removed by the Project.

As presented in DWR's Public Access Summary of the Project Site,¹⁵ on page 5, there is no existing designated parking, and visitors park their vehicles on the shoulder of Liberty Island Road. Based on Solano County regulations, parking is permissible on the east shoulder of Liberty Island Road but is illegal on the west shoulder of Liberty Island Road. Even though there is no designated parking, new turnaround areas will be provided by the Project and areas within and adjacent to the turnaround at the eastern terminus of Liberty Island Road can accommodate approximately 36 parking spots.¹⁶ In addition, existing informal uses within the Liberty Island Road right-of-way will continue on the portions of Liberty Island Road that remain following Project implementation; this includes approximately one mile of safe, legal parking along the south shoulder of the portion of Liberty Island Road that runs east-west along the north side of the Project Site. Any parking on Liberty Island Road or the new turnaround areas will be required to comply with County regulations and rules, consistent with existing uses.

The total length of "available shoreline for fishing opportunities" presented in Table IV.J-4 of 22.23 miles does not represent all potential available Delta shoreline fishing opportunities and, therefore, also does not represent an accurate depiction of total available parking opportunities throughout the Delta. The commenter posits that "30% of regional bank fishing capacity would be lost with the current Lookout Slough Project design." This statement inflates existing facts, because:

- 1) The commenter's calculations are based on a self-described "cursory inspection" of Google Earth imagery immediately surrounding the identified potential shoreline fishing locations in Table IV.J-1, totaling the visually estimated number of parking spaces, and then calculating the percentage impacted by removal of parking along Liberty Island Road on the Project Site. This calculation does not speak to the amount of "regional bank fishing capacity" that would be lost due to the Project, as the commenter states. This calculation instead serves to speak to the percentage of total informal parking space available, among a limited sample of potential shoreline fishing locations, that is located on the Project Site, as assessed visually by a single individual. This evaluation does not meet the standards of substantial evidence. See **Global Response 2: Substantial Evidence** for more information.
- 2) The commenter's calculations are based on an assumption that available parking must be immediately adjacent to the identified shoreline in order to present a

¹⁵ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021

¹⁶ Wood Rodgers, Liberty Island Road Potential Parking Alt 2. February 18, 2021.

recreational opportunity to fish. The commenter is attempting to add an "adjacent parking" parameter to the definition of "available shoreline for fishing opportunities" used by DWR in the analysis. However, DWR is not required to implement an "adjacent parking" parameter but is instead entitled to "substantial discretion in determining the appropriate threshold of significance to evaluate the severity of a particular impact." See **Global Response 2: Substantial Evidence** for an explanation as to why differences of opinion with respect to environmental issues addressed in an EIR, including the definition of significance thresholds and determination of impacts, is permitted under CEQA.

In order to evaluate Impact 2.a.iii, *Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region*, the Revised Final EIR (page IV.J-4) defines "available shoreline for fishing opportunities" both on and off-site as "shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish." This definition does not consider the availability of formal parking facilities at the potential shoreline fishing locations presented in Table IV.J-1 of the Revised Final EIR, because no such facilities exist at the Project Site. See **Global Response 3: Methods of Analysis** for additional discussion of how the analysis included a complete and good faith effort to review potential shoreline fishing opportunities for proximity to informal parking along nearby roadways, and for discussion of the additional data collected to verify and amplify information on potential local and regional shoreline fishing opportunities within a 60-minute drive of the Project Site, and within the Delta region, and the methods used in the analysis to determine significance in the Revised Final EIR.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Taking into consideration available parking adjacent to shoreline fishing locations would not change the conclusions in the Revised Final EIR.

3-2 The comment asserts that DWR presents speculative and factually erroneous claims in the Revised Final EIR, specifically regarding use of data from online angler's forums and the legality of potential shoreline fishing locations identified from such websites. The commenter suggests that use of these data sources, "promulgate[s] a myth of plentiful, legal, bank fishing access in the California Delta" and that conclusions are offered "without any supporting evidence."

Due to the widespread practice of shoreline fishing at "informal" fishing locations (as brought to DWR's attention by the concern regarding a reduction in this very type of fishing opportunity at the Project Site) DWR's analysis sought to include informal potential shoreline fishing locations by reviewing unofficial, but public, data sources such as online angler's forums and crowd-sourced lists of fishing spots. There are no official data repositories that report the magnitude or locations of informal shoreline fishing in the Delta, therefore this information is helpful, is relied upon by the public, and can only be gathered from the types of online, crowd-sourced forums used (in part) in the Revised Final EIR analysis, which makes these sources an adequate, publicly available source of information under CEQA.

The Revised Final EIR does not offer a comparison of the quality or accessibility of the identified locations in Table IV.J-1 (based on legality, parking availability, or any other factors) other than an absence of dense vegetation such that it provides a realistic opportunity to fish. While DWR does not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted, the method of analysis to evaluate Impact 2.a.iii, Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region, did not differentiate whether potential shoreline fishing opportunities could be legally accessed at the Project Site or within a 60-minute drive of the Project Site, because DWR is aware of public concern related to the removal of illegal shoreline fishing opportunities on the Project Site. If legality is to be considered in the analysis (both on the Project Site and within the local region), the calculated amount of "available shoreline for fishing opportunities" removed by the Project would decrease from 6% (as reported in the Revised Final EIR) to 2.4%, as outlined in Global Response 3: Methods of Analysis. This Global Response also provides further discussion of how and why the assessment methods were developed and identifies text changes made to the Revised Final EIR that clarify issues of illegal fishing access.

See also **Global Response 2: Substantial Evidence**. Substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts (CEQA Guidelines Section 15064(b)). Argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence that is not credible does not constitute substantial evidence (CEQA Guidelines Section 15064(a)). As the comment provides no facts or other substantial evidence to support an assertion that the physical environment could ultimately be significantly impacted as a result of the Project, the EIR is not required to analyze or mitigate for the asserted but unsubstantiated impact.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region.

3-3 The commenter asserts that DWR's analysis of both "available shoreline for fishing opportunities" and "total shoreline" muddles the analysis, and that "total shoreline" is irrelevant because it includes shoreline that cannot be practically or legally accessed.

As stated in the 2023 Technical Memorandum referenced in the Revised Final EIR (page 1),¹⁷ both the "total shoreline" and the "available shoreline for fishing opportunities" are relevant for analyzing the overall recreation impact analysis. There are multiple reasonably foreseeable interpretations of what constitutes an opportunity to fish from the shoreline; therefore, potential shoreline fishing opportunities at the Project Site and in the region were evaluated using two distinct methods: one method calculated "total shoreline" reachable by a combination of vehicle and foot, regardless of whether the degree of vegetation cover provides access to the waterway, while the other method assessed "available shoreline for fishing opportunities" (i.e., shoreline free of dense vegetation such that it provides a realistic opportunity to fish).

The methods used to assess "total shoreline" are science-based and clearly outlined in the 2023 Technical Memorandum. See **Global Response 2: Substantial Evidence** for a definition of what constitutes substantial evidence and how it may be used in determining whether a project may have a significant effect on the environment.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Exclusion of the "total shoreline" analysis would not change the conclusions in the Revised Final EIR.

3-4 The comment expresses concern about how certain data sources (e.g., census tract data, the 2021 in-person visitor survey, etc.¹⁸) were utilized in the analysis.

As the commenter suggests, the Delta Stewardship Council (DSC) remanded the Project's Certification of Consistency back to DWR on July 16, 2021 for further consideration, finding that there was not sufficient evidence in the record to support DWR's finding that the Project was consistent with Delta Plan Policy GP1(b)(3), Best Available Science, specifically as it related to the criterion of Inclusiveness. DWR supplemented the information originally provided in a Re-Certification of Consistency for the Project; and DSC issued a finding that sufficient evidence had been provided and dismissing all appeals in its Determination Regarding Appeals of the Revised Certification for the Project on April 29, 2022.

¹⁷ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.

¹⁸ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

The use of census data was at question in the remanded Certification of Consistency and was found to be appropriate.¹⁹ However, the question of whether census data should be used is *not* in question for reconsideration in the Revised Final EIR, because the use of census data to "estimate the population in the immediate area of the project" is relevant to the analysis in Impact 2.a.i (*Impacts resulting from an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated from displacement impacts to other shoreline fishing opportunities in the Delta*); however, the Revised Final EIR focuses solely on Impact 2.a.iii (*Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region*). See Global Response 1.2: Scope of the Revised EIR.

The commenter also provides use estimate calculations for the Project Site based on analysis of the data that DWR collected in the 2021 in-person visitor survey (conducted as part of the DSC Re-Certification process). The analysis in the Revised Final EIR used information collected from the on-site survey where relevant to "opportunities to fish from the bank," but did not use the data to describe the population size of local anglers or use of the Project Site, based on the Court's following instructions:

"The number of fisherpersons is relevant to the first threshold of significance, but as to the third threshold of significance the concern is whether the Project will substantially decrease *opportunities* to fish from the shoreline within the Delta region. Thus, whether people are currently using the Project Site for fishing is not the inquiry. Instead, the inquiry is how will the Project effect opportunities to fish from the shoreline within the Delta."

See **Global Response 3: Methods of Analysis** for additional discussion of the data collected to verify and amplify information on potential local and regional shoreline fishing opportunities within a 60-minute drive of the Project Site, and within the Delta region, and the methods used in the analysis to determine significance in the Revised Final EIR.

3-5 The commenter reiterates the concerns presented in Comments 3-1 through 3-4 in a Conclusions section.

See Responses 3-1 through 3-4.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region.

¹⁹ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021

COMMENT LETTER 4



July 16th 2023 California Department of Water Resources P.O. Box 942836 Sacramento, CA 94236-0001

RE: Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Revised EIR

On behalf of the many thousand supporters and members of Backcountry Hunters & Anglers, we appreciate the opportunity to comment on the revised EIR for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. We have several comments related to the revised analysis, which we expand upon in the remainder of this letter. BHA is a non-profit organization that champions the conservation of public lands and waters through advocacy, education and hands-on stewardship work; the organization also supports public recreation access to our state's lands and waterways and is concerned by the analysis that DWR has performed to evaluate the impacts of recreation from the Lookout Slough Tidal Restoration Project.

Significant and growing visitation would be impacted

As DWR is aware, recreation use at the project site is considerable, especially for fishing and waterfowl hunting. About 21,500 recreation visits annually occur here, based on the survey of recreationists that DWR recently completed (but has failed to reference in its revised EIR). About 40% are fishing for food, emphasizing the area's importance to lower income families. Although DWR's survey did not ask the origins of visitors, information gathered by Liberty Island Access (LIA) shows they come from throughout Solano County and beyond, likely drawing a cross section of the county, and region's diverse population.

Demand for recreation at the site will likely increase with the county's growing population, projected to increase by 20 percent over the next 40 years (California Department of Finance). Solano County's Christopher Drake concurs, noting that recreation may grow, especially as DWR's restoration project draws more attention to the area. Why does DWR assume that visitation numbers will remain static, when all available evidence suggests that regional demand for bank fishing and other recreation activities will only grow, if for no other reason than expanding population?

Driving distance assumptions are inappropriate

As California State Parks' Central Valley Vision Implementation Plan 8 points out, Central Valley residents travel an average of 50 minutes to reach favorite recreation destinations, not the one hour statewide figure cited on page IV J-2. Statewide and regional averages include high value recreation, such as snow skiing, big game hunting, or overnight camping trips, for which recreationists are likely willing to travel farther than they are for everyday activities such as

4-1

bank fishing. It is improbable that bank fishers currently accessing the project site I-80 corridor would drive an additional hour to shorelines in Antioch, Oakley, or Sherman Island.

To use a 60 minute driving time as the basis for comparing against other "available" shoreline opportunities underestimates the impact on the regional opportunities simply by overestimating the region. The CA Delta is quite large and has distinct districts in the Northern, Southern, Eastern, and Western portions of it. The Northern Delta has a pronounced lack of public access opportunities of any kind, despite being closest to the high-population I-80 corridor. LIA's survey studies showed that while LIER attracts visitors from all over the Bay Area and Central Valley region, the highest proportion of visitors reside in the Dixon / Vacaville area, which is roughly 30 min away. DWR should have identified other "available" shorelines based on driving distance from the central area where the majority of users drive from, not a radius from the project site itself. DWR's methodology over-inflates the number of alternative shoreline access sites that users could access, and thus underestimates the significance of impact.

Lack of parking and legal access considered

The project disproportionately impacts bank fishers, not only due to a loss of access to fish Shag Slough and LIER, but also due to the loss of legal parking within close proximity to bank fishing access. Both legal and suitable shoreline for fishing and parking are essential for angling in the area, however the EIR only measures the linear feet of shoreline available when considering impacts to recreation. The proposed 16 parking spaces hardly make up for the 1.5 miles of parking that will be lost, especially with the new boat ramp which will likely increase the demand for parking. Several of the alternative fishing areas listed by DWR only allow for a few vehicles to park despite the thousands of feet of available shoreline referenced. With no public transportation this inevitably restricts access to only a select few.

Furthermore, several of the locations listed in the EIR as available for shore fishing state no trespassing and require private land easements to access, like the "Ulatis Creek", "Ryer Island" "Alamo Creek", and "Hastings Island" locations. Other locations referenced do not permit fishing, like the 4370 feet of shore fishing access at "Winchester Lake," which does not allow fishing from levees or the 7790 ft at "Calhoun Cut" which prohibits land-based access to prevent ecological damage. The EIR is conflating several factors and ignoring others when listing the available shoreline for fishing.

Mitigation is inadequate

During meetings with recreation stakeholders and DWR, both California Department of Fish and Wildlife (CDFW) and Solano County staff recommended that DWR provide adequate public parking and other features of contemporary boat ramps, a fishing pier for anglers, trails for nature study, or if nothing else, funding to improve off site areas suitable for these uses.

Adequate mitigation for the project's impacts to recreation should have been developed per applicable state law, the Davis-Dolwig Act (Water Code sections 11900-11925), and DWR could

4-2 (Cont)

4-3

have leveraged the expertise of CDPR, CDFW, and local parks agencies in planning for recreational features as part of the Lookout Slough restoration project. The law provides, in part:

"The Legislature further finds and declares it to be the policy of this State that recreation and the enhancement of fish and wildlife resources are among the purposes of state water projects; that the acquisition of real property for such purposes be planned and initiated concurrently with and as a part of the land acquisition program for other purposes of state water projects; and that facilities for such purposes be ready and available for public use when each state water project having a potential for such uses is completed." (Water Code section 11900)

"As used in this chapter, "project" means any physical structure to provide for the conservation, storage, regulation, transportation, or use of water, constructed by the State..." (Water Code section 11903)

"There shall be incorporated in the planning and construction of each project those features (including, but not limited to, additional storage capacity) that the department, after giving full consideration to any recommendations which may be made by the Department of Fish and Game, the Department of Parks and Recreation, any federal agency, and any local governmental agency with jurisdiction over the area involved, determines necessary or desirable for the preservation of fish and wildlife, and necessary or desirable to permit, on a year-round basis, full utilization of the project for the enhancement of fish and wildlife **and for recreational purposes** to the extent that those features are consistent with other uses of the project, if any. It is the intent of the Legislature that there shall be full and close coordination of all planning for the preservation and enhancement of fish and wildlife and for recreation with state water projects by and between the Department of Water Resources, the Department of Parks and Recreation, the Department of Fish and Wildlife, and all appropriate federal and local agencies." (Water Code section 11903)

"The planning for public recreation use ... in connection with state water projects shall be a part of the general project formulation activities of the Department of Water Resources, in consultation and co-operation with the departments and agencies specified in Section 11910, through the advance planning stage, including, but not limited to, the development of data on benefits and costs, recreation land use planning, and the acquisition of land. In planning and constructing any project, the department shall, to the extent possible, acquire all lands and locate and construct, or cause to be constructed, the project and all works and features incidental to its construction in such a manner as to permit the use thereof ... for recreational purposes upon completion of the project" (Water Code section 11911).

The Lookout Slough project is comparable to those described in the previous provisions. Its construction fulfills the State Water Project's obligations to comply with regulations regarding SWP's continued operation. Yet, in proposing its project, DWR completed hardly any of the planning required of it by the Davis-Dolwig Act.

Several departments and agencies such as CDFW and the Delta Protection Commission, made suggestions related to mitigation that DWR ignored. These include moving the first breach of

4-4 (Cont) the Shag Slough levee further south to preserve more bank fishing access, building a kayak friendly boat launch dock, a small fishing pier, and most importantly, adequate parking to support both the existing recreation use as well as the new recreation users that will be attracted by a new kayak launching opportunity. Some of these recommendations could still be accomplished. If these mitigation measures were incorporated, it might help to decrease parking congestion and shoreline congestion, which would reduce the impacts on bank fishing at the site.

Conclusions

We are concerned that DWR is undervaluing bank fishing and waterfowl hunting as attractions when it comes to recreation use. This is especially concerning considering that DWR has other projects underway, such as Little Egbert Tract and Prospect Slough. Allowing substandard analysis of studies that minimize or ignore significant impacts on recreation use sets a precedent for near and long term cumulative loss in opportunities for the public to access state lands and waterways. Californians have a right to fish per Section 25, Article 1 of the state constitution and Lookout Slough's design permanently cuts off LIER from the land-based access that users have enjoyed for decades. To suggest that the impacts of removing several miles of accessible shoreline is insignificant to the many low-income residents of the North Delta, many of whom fish for food, is unacceptable. We support the project's objectives and the habitat restoration of the Delta; however, we strongly urge DWR to consider mitigating the impacts of their project, to be a good neighbor to the residents of the region who have been recreating at Shag Slough and LIER for many years.

Sincerely,

Devin O'Dea California Chapter Coordinator Backcountry Hunters & Anglers 4-4 (Cont)

Letter 4 Backcountry Hunters and Anglers Response

4-1 The comment asserts that DWR did not properly account for increasing demand for bank fishing and other recreation activities at the Project Site due to the increasing county population.

As discussed in **Global Response 1: Purpose and Scope of the Revised Final EIR**, consistent with CEQA Guidelines Section 15088.5(f)(2), DWR provided notice in the NOA that public comments should be limited only to the recirculated portion of the Project's EIR that has been revised to evaluate recreational opportunities to fish from the shoreline. The change in regional demand for bank fishing and other recreational activities due to increased population growth is not an impact of the Project. Increase in the use of existing neighborhood and regional parks or other recreational facilities due to increased population such that the substantial physical deterioration of the facility would occur or be accelerated was evaluated under Impact 2.a.i in Section IV.J of the 2020 Final EIR and was not in the scope of the Revised Final EIR.

4-2 The comment suggests that the use of the 60-minute driving radius from the Project Site inflates the number of alternative shoreline fishing locations that users could access and therefore underestimates the impact.

As stated on page IV.J-7 of the Revised Final EIR, DWR, as the Lead Agency for the Project, added a significance threshold to evaluate the Project's potential to substantially decrease opportunities to fish from the shoreline within the Delta region. The threshold does not evaluate potential shoreline fishing opportunities based on individuals' driving distance to the Project Site.

The use of the 60-minute radius in the Revised Final EIR is further described in **Global Response 3: Methods of Analysis** and Response 2-4.

4-3 The comment asserts that access to shoreline fishing opportunities is limited by available parking and legal access.

See Global Response 3: Methods of Analysis and Responses 2-2, 2-3, 3-1, and 3-2.

DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. Taking into consideration allowable parking and legal access to shoreline fishing locations would not change the conclusions in the Revised Final EIR. 4-4 The comment asserts that adequate mitigation has not been provided to mitigated for impacts to recreational uses per the Davis-Dolwig Act.

The Davis-Dolwig Act ("Act", also analyzed by the Delta Stewardship Council under Policy DP P2; Cal. Code Regs., tit. 23, Section 5011) specifies that the State, not water ratepayers, should fund the recreation component of the State Water Project. (Cal Water Code Section11925 et seq.) Specifically, the Act states that the broad intent of the Legislature is that the State Water Project facilities be constructed "...in a manner consistent with the full utilization of their potential for the enhancement of fish and wildlife and to meet recreational needs." While DWR is charged under the Act with implementing construction of State Water Project facilities, it does not provide criteria specifying how much or what kinds of recreation or fish and wildlife facilities are to be developed as part of the State Water Project facilities. Additionally, the Davis-Dolwig Act does not provide mitigation thresholds for State Water Project facilities, only that "recreation and the enhancement of fish and wildlife resources are among the purposes of state water projects," and that facilities for such purposes be ready and available for public use when each state water project having a potential for such uses is completed." (Cal. Water Code Section 11900.) The Project is specifically designed as a fish and wildlife enhancement project and is fully compliant with the Davis-Dolwig Act. Additionally, the Project was found to be consistent with Policy DP P2, which incorporates the Davis-Dolwig Act, by the Delta Stewardship Council.

As stated in CEQA Guidelines Section 15126.4(1), an EIR shall describe feasible measures which could minimize significant adverse impacts. Since DWR has determined that based on the evidence in the whole of the record, and considering what is reasonably feasible, including that provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region, no mitigation is required.

Even though no mitigation measures are required, as described on page IV.J.13 of the Revised Final EIR, the Project design includes installation of a new boat ramp in the northeastern portion of the Project Site, on the north side of the northern-most breach of the Shag Slough Levee. The boat ramp would accommodate hand launching of watercraft to provide public access to the Project's newly created 20 miles of tidal channels, Shag Slough, and Liberty Island Ecological Reserve (Reserve); thus, while pedestrian access to Shag Slough Levee and the Reserve would be curtailed, the opportunity to fish from the remnant levee system at the Reserve would be maintained. From the new boat ramp, small watercraft could travel approximately 1.45 miles to the Reserve, where an informal hand-launching site (comprised of an earthen berm) is currently used just south of Shag Slough Bridge as well as continue to utilize the shoreline for fishing.

4-5 The comment expresses concern that DWR is undervaluing bank fishing and waterfowl hunting as attractions when it comes to recreational use.

As described in Response 4-4, DWR has determined that based on the evidence in the whole of the record, and in light of what is reasonably feasible, including the information provided in the Revised Final EIR, that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region, therefore, no mitigation is required. As further described, as part of the Project, DWR is including installation of a new boat ramp to accommodate hand launching of watercraft to provide public access to the Project's 20 miles of tidal channels, Shag Slough, and the Reserve.

 From:
 Stephanie Freed

 To:
 G. Braiden Chadwick; Catherine McEfee; Rachael Carnes

 Subject:
 FW: [EXT] Lookout Slough Public comment

 Date:
 Monday, July 17, 2023 4:31:06 PM

 Attachments:
 image001.png image002.gif image003.png

Stephanie Freed, PWS, CERP

Assistant Director of Operations

Eco Invo Par

Ecosystem Investme t Partners

2330 Marinship Way | Suite 120 | Sausalito, CA 94965

P 415.990.6694

ecosystempartners.com | my linkedin | vCard

From: Chu, Ling-ru@DWR <Ling-ru.Chu@water.ca.gov>
Date: Monday, July 17, 2023 at 4:29 PM
To: Stephanie Freed <stephanie@ecosystempartners.com>, Biggs, Charlotte@DWR
<charlotte.biggs@water.ca.gov>, Taylor, Rachel@DWR <rachel.taylor@water.ca.gov>
Cc: Riordan, Dan@DWR <Dan.Riordan@water.ca.gov>
Subject: FW: [EXT] Lookout Slough Public comment

From: Francis Coats <fecoats@msn.com>
Sent: Monday, July 17, 2023 4:02 PM
To: Chu, Ling-ru@DWR <Ling-ru.Chu@water.ca.gov>
Subject: Lookout Slough Public comment

You don't often get email from fecoats@msn.com. Learn why this is important

To what extent does the proposal create physical barriers to public access and use of state and local agency owned land (subject to the public right to fish from and on under section 25 article I California Constitution)? Is it anticipated that public agencies will post no trespassing signs, or erect gate and maintain them closed, to discourage public access to and use of the land or any portion of the land? If access to some of the land will be obstructed or discourage, why is it not feasible to refrain from interfering with public access?

What of this land would be subject to annual flooding in the absence of levees, ditches and pumps? Isn't that land subject to the public trust, including the public right to enter and engage in recreational activity (see California v. Superior Court (Lyon) Clear Lake 1981 29 Cal. 3d 210; California v. Superior Court (Fogerty) Clear Lake, 1981 29 Cal. 3d 240).

Prior experience at the western end of Fremont Weir leads me to believe that the Central Valley Flood Protection Board/Sacramento and San Joaquin Drainage District, the Department of Water Resources and the Department of Fish and Wildlife will actively obstruct public access and interfere with public use. At Fremont Weir: CVFPB/S&SJDD omitted an express reservation of the absolute public right to fish when transferring land on the banks of the Sacramento River to private parties (Llowell and Irma Edson) in 1978; failed to reserve "to the people" convenient access to the Sacramento River although the land was on or near the river and provided the only convenient to the public access to the river at that point; DFW provided the public with false information in 2014, stating there was no reserved easement for public access across the land transferred in 1978, to discourage public access to and use of the Sacramento River and other state-owned lands and waters; DWR refused to inquire of its own employees as to whether state funds had ben expended to build and maintain a parking lot on the property transferred in order to avoid dealing with the possibility that the state had acquired a permanent right to use the parking lot an the road and trails connected to it for public access to the river under implied dedication and Civil Code 1009 subd. (d). Given the above experience it seems foreseeable that the Lookout Slough project will result in a reduction of public access to and use of navigable waters and land, land subject to public fishing rights, and public trust lands generally.

The document does not coherently describe and discuss the public trust issues involved in making decisions which will foreseeably impair public access and use otherwise protected under the navigable easement and the public right to fish.

Francis Coats 3392 Caminito Avenue Yuba City, CA 95991 (530) 701-6116 <u>fecoats@msn.com</u>

Sent from Mail for Windows

5-1 (Cont)

Letter 5 Francis Coats Response

5-1 The comment questions whether the Project would result in barriers to public access and use of state and local agency owned land (lands subject to the public trust). The comment raises issues addressing impacts of the Project associated with public access, including land subject to annual inundation. The comment makes assumptions that based on past separate projects that the Project would also result in a reduction of public access to and use of navigable waters and land subject to public fishing rights and public trust.

As discussed in **Global Response 1: Purpose and Scope of the Revised Final EIR**, consistent with CEQA Guidelines Section 15088.5(f)(2), DWR provided notice in the NOA that public comments should be limited only to the recirculated portion of the Project's EIR that has been revised to further evaluate recreational opportunities to fish from the shoreline. Impacts of the Project on public trust lands and use of navigable waters and land is not within the scope of the Revised Final EIR.

The Project does not propose any impediments within navigable waters, nor does it propose excluding access to navigable waters within the Project Site. As described on page IV.J.13 of the Revised Final EIR, the Project design includes installation of a new boat ramp in the northeastern portion of the Project Site, on the north side of the northern-most breach of the Shag Slough Levee. The boat ramp would accommodate hand launching of watercraft to provide public access to the Project's newly created 20 miles of tidal channels, Shag Slough, and the Reserve; thus, while pedestrian access to Shag Slough Levee and the Reserve would be curtailed, the opportunity to fish from the remnant levee system at the Reserve would be maintained. From the new boat ramp, small watercraft could travel approximately 1.45 miles to the Reserve, where an informal hand-launching site (comprised of an earthen berm) is currently used just south of Shag Slough Bridge as well as continue to utilize the shoreline for fishing. This page intentionally left blank

Appendix A Revised Section IV.J, *Recreation*, and 2023 Technical Memorandum

IV. ENVIRONMENTAL IMPACT ANALYSIS J. RECREATION

1. INTRODUCTION

This section discusses the existing recreational resources near the Proposed Project Site and throughout the Delta and evaluates the potential direct and indirect impacts of the Proposed Project on recreational resources. To determine whether the Proposed Project would result in a significant environmental impact related to recreation, this Draft EIR evaluates impacts related to physical deterioration of recreational facilities and impacts from the need for construction or expansion of recreational facilities. Potential impacts to recreation are assessed in light of existing formal and informal recreation practices and areas in the Delta, plans and policies related to Delta recreation, and easements present in the Proposed Project Site that are pertinent to recreation. This section also includes an evaluation of the Proposed Project on regional fishing opportunities.

2. ENVIRONMENTAL SETTING

a. Local Recreation

There are no officially sanctioned, public recreational facilities within the Proposed Project Site; though there are private facilities and access points to public areas with recreational opportunities. Recreational opportunities within the Proposed Project Site are presently limited to waterfowl hunting at the private Liberty Farms Duck Club. Adjacent to the Proposed Project Site, the Shag Slough Bridge provides pedestrian access to the Liberty Island Ecological Reserve (the Reserve), which provides recreational opportunities further detailed below.

The Liberty Farms Duck Club is a privately owned and operated venue for waterfowl hunting. Because the Liberty Farms Duck Club is not open to the public, use data are not available. The Liberty Farms Duck Club was created in 2005 through a 1,634-acre restoration project, which created managed wetland cells throughout the Liberty Farms Property. The project restored approximately 975 acres of seasonal and semi-permanent wetlands, 575 acres of upland grasslands, and 84 acres of riparian habitat, consistent with an easement purchased by the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) and the California Waterfowl Association. The project was designed to create nesting habitat and winter cover for avian species popular for hunting such as mallard (*Anas platyrhynchos*), pheasant (*Phasianus colchicus*), gadwall (*Mareca strepera*), cinnamon teal (*Anas cyanoptera*), and dove (*Columbidae* spp.).

Additionally, fishing occurs on the Shag Slough Levee and from the Shag Slough Bridge. Technically, fishing is not allowed as the Shag Slough Levee is private land and the Shag Slough Bridge has signage posted indicating "no fishing from bridge"; however, anglers park along Liberty Island Road and fish off the side of the road and the bridge into Shag Slough. The Shag Slough Levee and Bridge are intended for flood control and transportation purposes, respectively (although the bridge is structurally deficient and presently closed to vehicular traffic). As such, they are not maintained for recreational purposes and use data <u>are was</u> not available. However, the bridge provides pedestrian access to <u>a small portion of the western <u>eastern</u> shoreline of Shag Slough-<u>in, located on the western side of the Reserve</u>, where <u>bank shoreline</u> fishing is allowed.</u>

The Reserve is located on the eastern side of Shag Slough. The Reserve is maintained by CDFW and is open to the public for recreational activities. The Reserve is primarily accessed by boats but can be accessed by pedestrians from the Proposed Project Site via the Liberty Island Bridge.

The interior of the Reserve is open to tidal inundation and is shallow enough to only be accessible by kayak or shallow-water boats. Recreational activities within the interior of the Reserve include fishing, bird watching, and hunting. Activities which may be carried out on foot within the Reserve are limited to a small-portion of the shoreline along higher ground and include shoreline fishing and bird watching. These activities occur along the western bank of Shag Slough near the Shag Slough Bridge, which provides the only pedestrian access point.¹

Fishing occurs year-round at the Reserve. Fishing for Striped Bass is most popular in the fall, winter, and spring, coinciding with the fish migration, but also occurs year-round. Fishing for White Sturgeon also occurs on the Reserve, primarily in the winter and early summer. Most sturgeon anglers fish from the west bank of the Reserve into Shag Slough. Anglers for Striped Bass also fish along Shag Slough from the western side of the Reserve, and from boats in the Reserve's interior. Due to the limited access to recreation land at the Reserve, public use data for Shag Slough are was not readily available to incorporate into the Draft EIR. Subsequently, additional data was collected to verify and amplify information on local and regional shoreline fishing opportunities. The results of this additional data collection are described below.

b. Regional Recreation

Recreation is important to the economy and identity of the Delta. Popular recreational activities throughout the region often center on the Delta's waterways, wildlife, and agriculture. The Delta Stewardship Council estimates that approximately 12 million activity days of recreation occur in the Delta annually, capitalizing on recreational opportunities throughout the region such as fishing, boating, birding, and hunting.² While other recreational activities are present throughout the Delta, these activities are the primary focus of this analysis due to their presence within and near the Proposed Project Site and their potential to be affected by the Proposed Project.

According to the California Department of Parks and Recreation's 2012-2014 statewide recreation survey, a plurality of adult recreationists in California travel between 21 to 60 minutes to the places they visit most often for recreation.³ Based on this information, this analysis assumes that a 60minute driving radius defines the local scale surrounding the Proposed Project Site (i.e., the area

¹ [CDFW] California Department of Fish and Wildlife, "Reserve Land Management Plan," July 2015, https://www.wildlife.ca.gov/Lands/Planning/Liberty-Island-ER.

² Delta Stewardship Council, "The Delta Plan: Ensuring a Reliable Water Supply for California, a Healthy Delta Ecosystem, and a Place of Enduring Value" (Sacramento, April 26, 2018), http://deltacouncil.ca.gov/delta-plan-0.

³ California State Parks, "Survey on Public Opinions and Attitudes on Outdoor Recreation in California," January 2014.

within which local residents who recreate at the Proposed Project Site may travel to find alternative recreation opportunities). Therefore, Table IV.J-1 provides a sample of local opportunities to fish from a bank shoreline or pier within a 60-minute drive of the Proposed Project Site. Information for these recreational inventories was obtained from official documents such as the Delta Protection Commission's Inventory of recreational facilities in the Delta⁴, the Delta Stewardship Council's Delta Plan⁵, and City and County Parks Department webpages, as well as unofficial sources such as online angler's forums and crowd-sourced lists of fishing spots.⁶ The latter was included due to the popular use of waterways, levees, and bridges throughout the Delta as informal recreational facilities, similar to the Proposed Project Site, where shoreline access requires crossing private lands and includes 28 informal fishing areas and 30 fishing piers, which are included in Table IV.J-1 as appropriate based on distance from the Proposed Project Site and availability of bank fishing opportunities. As noted above, following publication of the EIR, additional research was undertaken to verify and amplify the information included in the Draft EIR describing opportunities to fish from a shoreline or pier within a 60-minute drive of the Proposed Project Site. The sources provided in the Draft EIR were re-examined for additional shoreline fishing opportunities, and new sources were identified, including CDFW's Ecological Reserves and Wildlife Areas webpage⁷ and additional online angler's forums (where local anglers discuss where they currently fish).^{8,9,10,11}

In addition, in order to ground-truth the information on fishing opportunities within a 60-minute mile drive of the Proposed Project Site, in-person visitor surveys were conducted at the Proposed Project Site in September/October 2021.¹² Question 8 of the 2021 visitor survey asked respondents if they fish in other locations in the Delta; the responses to this question were used to identify additional known shoreline fishing locations within a 60-minute drive of the Proposed Project Site.¹³

Table IV.J-1 represents a limited sample of the total amount <u>number</u> of area for shoreline and pier fishing <u>opportunities</u> available in the <u>Delta local area of the Proposed Project Site</u> based on the

⁴ Delta Protection Commission, "2015 Inventory of Recreation Facilities in the Sacramento-San Joaquin Delta," 2015.

⁵ Delta Stewardship Council, "The Delta Plan."

⁶ California Delta Chambers & Visitor's Bureau, "Delta Fishing Holes," accessed October 17, 2019, https://californiadelta.org/fishing/delta-fishing-holes/.

<u>7 California Department of Fish and Wildlife, "Places to Visit," accessed January 25, 2023, https://wildlife.ca.gov/Lands/Places-to-Visit/.</u>

<u>8 Sacramento-San Joaquin Delta National Heritage Area, "Delta Fishing," accessed January 25, 2023, https://visitcadelta.com/what-to-do/fishing/.</u>

⁹ FISHBRAIN, "Find your best fishing spot" interactive map, accessed January 25, 2023, https://fishbrain.com/explore/.

¹⁰ YouTube "Best Bank Fishing Spots on the CA Delta," accessed January 24, 2023, <u>https://youtube.com/watch?v=bA_5hLaciJo/.</u>

¹¹ Fishing Booker Blog, "California Delta Fishing: The Complete Guide," accessed January 23, 2023, <u>https://fishingbooker.com/blog/california-delta-fishing/.</u>

<u>12 Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat</u> <u>Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best</u> <u>Available Science Methods Used to Estimate Recreational Use. December 2021.</u>

<u>13 Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat</u> <u>Restoration and Flood Improvement: Attachment 2E. Additional Detailed Results from On-Site Visitor Surveys.</u> <u>December 2021.</u>

sources described above. The <u>As shown in Table IV.J-1</u>, the research undertaken subsequent to <u>publication of the EIR not only validated the locations included</u>, but also identified an additional <u>36 sites locations located</u> within a 60-minute drive of the Proposed Project Site. While this list is <u>still-not exhaustive and identifies locations that may require fees or have other access restrictions</u>, it provides a more complete context of the scale of available shoreline fishing opportunities in the <u>vicinity of the Proposed Project Site</u>. DWR does not condone trespassing or illegal access at <u>locations where only boating access is permitted or where access is fully restricted</u>.

Table IV.J-1 was further refined to include estimates of the length of bank available within these areas was assessed available shoreline for fishing at each identified shoreline fishing location. Available shoreline includes was defined as shoreline that has an absence of dense vegetation such that it provides a realistic opportunity to fish (i.e., will allow access to a fishing site and space for casting and recovery of fish); this definition was not limited by potential fee requirements or other access restrictions. Updated satellite imagery from Google Earth (taken June 2021) was used to identify the total length of "available shoreline for fishing opportunities" at each potential fishing location examined (in linear feet), based on the absence of vegetation, which was determined by reviewing current Google Earth imagery. Most areas in this table offer about 500dense vegetation, linear feet for shoreline fishing. Several areas offer substantial amounts of shoreline available for fishing, in particular Brannan Island State Recreation Area (approximately 3.000 linear feet), and an informal area near Rio Vista known as "The Patio" offers about 2,000 linear feet. Informal recreational opportunities are noted here due to the popularity of bank fishing from levee roads and other informal fishing areas throughout the Delta. However, because this practice often takes place on private property, this analysis is based on the availability of formal bank fishing opportunity at publicly managed recreational areas. Pier fishing opportunities were included in this total but accounted for approximately 1.05 miles of the 22.33 miles identified, or 4.7%. More discussion of the methods used to identify and calculate shoreline fishing opportunities is presented below under Impact b.iii.

Facility Location Name	Managing Entity	Location	<u>Available</u> <u>Shoreline</u> (Linear Feet)
"The Dairy" ²	NA – Informal	Near Rio Vista	<u>2,000</u>
"Tennessee's Spot"	NA – Informal	Near Isleton- B	<u>820</u>
"The Power Lines"	NA – Informal	Near Decker Island	<u>2,000</u>
"The Windmill"	NA – Informal	Near Isleton	<u>50</u>
Big Break <u>Regional Shoreline</u>	East Bay Regional Parks	Oakley	<u>3,280</u>
Cliffhouse Fishing Area	Sacramento County Parks	Near Isleton	<u>250</u>
Hogback Island Recreation Facility	Sacramento County Parks	Near Isleton	<u>2,540</u>
Sandy Beach County Park	Solano County	Rio Vista	<u>1,050</u>
Westgate Landing Regional Park	San Joaquin County	Lodi <u>Near Terminous</u>	<u>360</u>
Garcia Bend Park	City of Sacramento	Sacramento	<u>870</u>

Table IV.J-1. Selected Sample of Available Shoreline at and Shoreline Fishing and Pier Fishing Locations Sites within a One Hour 60-minute Drive of the Proposed Project Site¹

Facility Location Name	Managing Entity	Location	<u>Available</u> <u>Shoreline</u> (Linear Feet)		
Discovery Park	City of Sacramento	Sacramento			
Sherman Island Public Access Facility	Sacramento County Parks	Near Antioch	<u>2,090</u>		
Rio Vista Fishing Pier	City of Rio Vista	Rio Vista	<u>560</u>		
Georgiana Slough Fishing Access	Sacramento County Parks	Near Isleton	<u>4120</u>		
Brannan Island State Recreation Area	California State Parks	Near Rio Vista	<u>2,880</u>		
Antioch Fishing Pier – Antioch/ Oakley Regional Shoreline	East Bay Regional Parks	Antioch	<u>860</u>		
Antioch Pier -Downtown Fishing Pier – "Compy's"	City of Antioch	Antioch	<u>2,150</u>		
"The Dump Gate"	NA – Informal	Isleton	<u>650</u>		
"The Patio" <u>²</u>	NA – Informal	Near Rio Vista	<u>600</u>		
<u>Pittsburg Pier</u>	City of Pittsburg	<u>Pittsburg</u>	<u>1,940</u>		
Calhoun Cut Ecological Reserve ²	<u>CDFW</u>	Near Hastings Island	<u>7,790</u>		
Isleton River Fishing Spot	<u>NA – Informal</u>	<u>Near Isleton</u>	<u>410</u>		
Isleton Public Dock	<u>City of Isleton</u>	<u>Near Isleton</u>	<u>250</u>		
760 River Road Shoreline Fishing	<u>NA – Informal</u>	Near Isleton	<u>390</u>		
North Point Way River Access	City of Sacramento	<u>Sacramento</u>	<u>3,760</u>		
Barge Canal Recreation Access	City of West Sacramento	<u>West Sacramento</u>	<u>120</u>		
Miller Regional Park	City of Sacramento	<u>Sacramento</u>	<u>2,120</u>		
<u>River Walk Park</u>	City of West Sacramento	<u>West Sacramento</u>	<u>1,250</u>		
<u>The Barges²</u>	<u>NA – Informal</u>	Jersey Island	<u>7,750</u>		
Dutch Slough	<u>NA – Informal</u>	Jersey Island	<u>8,550</u>		
Little Franks Tract ²	<u>NA – Informal</u>	Bethel Island	<u>5,870</u>		
Maine Prairie Slough	<u>NA – Informal</u>	Near Hastings Island	<u>520</u>		
<u>Alamo Creek</u>	<u>NA – Informal</u>	<u>Near Binghamton</u>	<u>4,590</u>		
Kirker Creek	<u>NA – Informal</u>	Near Antioch	<u>1,300</u>		
<u>Ulatis Creek</u>	<u>NA – Informal</u>	Near Hastings Island	<u>3,520</u>		
<u>Sacramento River Deep Water</u> <u>Ship Channel²</u>	Reclamation District 1667	<u>Near Ryer Island</u>	<u>2,560</u>		
Egbert Cut ²	<u>NA – Informal</u>	<u>Near Ryer Island</u>	<u>1,890</u>		
Elk Slough ²	<u>NA – Informal</u>	Near Courtland	<u>700</u>		
Sacramento Drainage Canal ²	<u>Maintenance Area No. 9</u>	<u>Near Stone Lakes</u> <u>National Wildlife</u> <u>Refuge</u>	<u>990</u>		
Facility Location Name	Managing Entity	Location	<u>Available</u> <u>Shoreline</u> (Linear Feet)		
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Reclamation District 551 Borrow Canal ²	Reclamation District 551	Near Courtland	<u>2,430</u>		
North Stone Lake ²	<u>NA – Informal</u>	North Stone Lake	<u>2,740</u>		
Big Lake ²	<u>NA – Informal</u>	<u>Near Clarksburg</u>	<u>3,550</u>		
Main Canal ²	<u>NA – Informal</u>	Near Clarksburg	<u>1,090</u>		
Tule Canal ²	<u>NA – Informal</u>	Near Clarksburg	<u>2,630</u>		
<u>Toe Drain²</u>	<u>NA – Informal</u>	<u>Near Clarksburg</u>	4,760		
Winchester Lake ²	<u>NA – Informal</u>	<u>Near Clarksburg</u>	4,370		
<u>Greens Lake</u>	<u>NA – Informal</u>	<u>Yolo Bypass Wildlife</u> <u>Area</u>	<u>110</u>		
Freeport	<u>NA – Informal</u>	Freeport	<u>930</u>		
Prospect Island-Miner Slough ²	NA – Informal	Prospect Island	4,390		
<u>Wimpy's Marina</u>	Private	Near Thornton	<u>300</u>		
Arrowhead Launch	Private	Near Ryer Island	<u>490</u>		
BW Marina	Private	Near Terminous	470		
Hastings Island ²	<u>NA – Informal</u>	Hastings Island	<u>2,600</u>		
<u>Montezuma Day Use Area</u>	Solano County	Near Winter Island	<u>2,460</u>		
<u>Ryer Island²</u>	<u>NA – Informal</u>	Ryer Island	4,890		
Total Length of Available Shoreline: 117,910 feet (22.33 miles)					

¹ Shoreline fishing <u>sites locations</u> outlined in this table represent a limited sample of all shoreline fishing <u>sites locations</u> within a 60-minute drive of the Proposed Project Site. Data presented above do not represent a comprehensive inventory of shoreline fishing areas. <u>These locations and their names were compiled using a variety of sources, including online forums (where local anglers discuss where they currently fish), regardless of potential fee requirements or access restrictions.</u>

² <u>This location may include access restrictions (e.g., parking restrictions, boat-in access only, private land). DWR does</u> not condone trespassing or illegal access at locations where only boating access is permitted or where access is fully restricted.

3. REGULATORY SETTING

a. State Regulations

i. Delta Plan – Delta Stewardship Council (Council)

The 2013 Delta Plan prepared by the Delta Stewardship Council includes a recreation element, and within that element there is specific language (p. 196) to encourage recreation and tourism. No policies with regulatory effect are included in furtherance of this goal, but the element includes the following recommendations:

• DP R11. Provide New and Protect Existing Recreation Opportunities

- DP R12. Encourage Partnerships to Support Recreation and Tourism
- DP R13. Expand State Recreation Areas
- DP R14. Enhance Nature-based Recreation
- DP R15. Promote Boating Safety
- DP R16. Encourage Recreation on Public Lands
- DP R17. Enhance Opportunities for Visitor-serving Businesses

b. Local Regulations

Each of the counties (Alameda, Contra Costa, Solano, Sacramento, San Joaquin, and Yolo counties) that have unincorporated areas that coincide with the Delta Plan area have General Plans for those areas. These General Plans all have, as a state requirement, an open space element, which includes a discussion of outdoor recreation resources. However, whatever recreation resource goals, policies, and standards are included in each of those General Plans must be consistent with the Delta Plan.

4. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

Based on CEQA Guidelines Appendix G, a project could have a significant impact on recreational resources if it would cause any of the following conditions to occur:

- a) increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- b) include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Additionally, DWR, as the Lead Agency for the Proposed Project has included the following significance threshold: recognizes that shoreline fishing is important to the identity of the Delta. DWR is aware that the Proposed Project Site (along Liberty Island Road atop Shag Slough Levee) offers an opportunity for shoreline fishing used primarily by local residents and that it also provides pedestrian access to the Reserve, where additional shoreline fishing opportunities are located. In consideration of the importance of local and regional shoreline fishing opportunities, DWR has added the following significance threshold to address the Proposed Project's potential to reduce access to shoreline fishing opportunities for local residents in the vicinity of the Proposed Project Site, and within the Delta region generally:

c) substantially decrease opportunities to fish from the shoreline within the Delta region.

b. Project Impacts and Mitigation Measures

i. Increase the Use of Existing Neighborhood and Regional Parks or other Recreational Facilities such that Substantial Physical Deterioration of the Facility Would Occur or be Accelerated from Displacement Impacts to other Shoreline Fishing Opportunities in the Delta

The Shag Slough Bridge currently provides pedestrian access from the terminus of Liberty Island Road to the eastern shoreline of Shag Slough for bank fishing. However, this section of Liberty Island Road would be closed to the public as a result of the Proposed Project (Figure III-8). This would eliminate pedestrian access to bank fishing along the shoreline of the Reserve. As a result, it is possible that some angling use currently occurring on the Reserve would be shifted to other bank/shoreline fishing areas within the Delta.

Although no public use data are readily available for the Reserve, based on the fact that most Delta residents live on the outer fringes of the Delta in the "secondary zone" and most Californians travel a maximum of an hour to their preferred recreation spots, it is assumed that a relatively small number of people use the Reserve. It is estimated based on fishing rates of Delta residents¹⁴ and the population of the Proposed Project Site's Census Tract that approximately 200 people across the Tract partake in fishing. Of these, approximately 40% fish from the bank¹⁵, and a smaller subset use the Reserve for bank fishing purposes. Conservatively assuming that all 80 bank fishers visit the Reserve on a semi-regular basis and assuming that they would evenly disburse to the limited sample of public recreational facilities (Table IV.1-1) upon loss of bank fishing access, any given public recreation facility within an hour of the Proposed Project Site would only absorb approximately six to seven semi-regular users. These users would most likely fish from shoreline areas that had previously experienced bank fishing. Due to the relatively small potential for increased use at other facilities, substantial deterioration or accelerated deterioration would not occur. Therefore, impacts of the Proposed Project would not exceed the applicable threshold of significance related to an increase in the use of recreational facilities such that substantial physical deterioration would occur or be accelerated and the Proposed Project's impact with regard to this threshold would be less than significant.

ii. Impacts from Recreational Facilities That are Part of the Project or Resulting from any construction or expansion of parks and recreational facilities.

Although some outdoor recreation opportunities, such as fishing from a boat, may increase onsite due to establishing new tidal channels, the goals of the Proposed Project do not include other improvements related to public access and recreation. Because the Proposed Project does not include the construction of recreational amenities and would not displace recreational facilities that would need to be re-constructed elsewhere, new park and recreation facilities would not be constructed. Therefore, impacts of the Proposed Project would not exceed the applicable threshold of significance related to construction or expansion of recreational facilities and the Proposed Project's impact with regard to this threshold would be **less than significant**.

¹⁴ Amy Mickel, Stanley Taylor, and Gregory Shaw, "Recreation & Tourism in the Delta," n.d., 81.

¹⁵ Cynthia Thomson and Rosemary Kosaka, "Results of the 2015 economic survey of Central Valley Anglers, p. 20.

iii. Impacts resulting from a decrease in opportunities to fish from the shoreline within the Delta region.

The Proposed Project Site is currently used by pedestrians to access the Reserveopportunities for shoreline fishing alongon the eastern shorelinewest bank of Shag Slough-<u>(along Liberty Island Road atop Shag Slough Levee) as well as the east bank of Shag Slough (within the Reserve, accessed via Shag Slough Bridge).</u> Pedestrian access to the Reserveshoreline fishing opportunities would be eliminated by the Proposed Project.

As noted above, the Delta region (Table IV.J-1) offers multiple locations where anglers can fish from the shoreline or a pier. In order to assess impacts resulting from a decrease in shoreline fishing opportunities in the Delta region resulting from implementation of the Proposed Project, research was undertaken to examine the amount of shoreline fishing opportunities available at the Proposed Project Site, within a 60-minute drive of the Proposed Project Site, and within the Delta region (as defined by the legal Delta boundary). To provide accurate context for the amount of shoreline fishing opportunities available on the Proposed Project Site and Reserve, the availability of shoreline fishing opportunities must be assessed at a local and/or regional scale as well. For the purposes of this analysis, "regional scale" was defined as the area within the legal boundary of the Delta. In addition, as noted in *Environmental Setting, Regional Recreation, a* 2014 California Department of Parks and Recreation statewide recreation survey found that the majority of recreationists in California travel between 21 and 60 minutes to the places they visit most often for recreation. Therefore, this analysis has defined "local scale" as the area within a 60-minute drive of the Proposed Project Site.

There are multiple reasonably foreseeable interpretations of what constitutes an opportunity to fish from the shoreline; therefore, shoreline fishing opportunities at the Proposed Project Site and in the region were identified and evaluated using two distinct methods: one method used a Geographic Information System (GIS) to calculate "total shoreline," reachable by a combination of vehicle and foot, regardless of whether the degree of vegetation cover provides access to the waterway. The second method identified "available shoreline for fishing opportunities" (i.e., shoreline free of dense vegetation such that it provides a realistic opportunity to fish from the bank).¹⁶ As described above under Environmental Setting, Regional Recreation, the amount of available shoreline was identified through the use of recent satellite imagery from Google Earth (2021). This approach is consistent with the method used in the Draft EIR. Using these two methods provided a reasonable range and characterization of shoreline fishing opportunities available to anglers at the Project Site and in the region. The two methods used, and their respective results, are presented in detail in the April 2023 Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region (2023 Technical Memorandum),¹⁷ and they are summarized below.

<u>16 Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.</u>

¹⁷ Ibid.

Total Shoreline Analysis

Total Shoreline on the Proposed Project Site and Liberty Island Ecological Reserve

As noted above, the Proposed Project Site is currently used by pedestrians to access shoreline fishing opportunities on the west bank of Shag Slough (along Liberty Island Road atop Shag Slough Levee) as well as the east bank of Shag Slough (within the Reserve accessed via the Shag Slough Bridge). The total length of the Shag Slough Levee on the Proposed Project Site with the potential to offer shoreline fishing opportunities is approximately 1.5 miles, running from the northern property boundary to the Shag Slough Bridge (there is a vehicular gate at Shag Slough Bridge with signage posted marking "no trespassing" and "private property," past which fishing is not allowed). The total length of remnant levee within the Reserve with the potential to offer shoreline is approximately 3 miles. Therefore, the Proposed Project Site provides access to approximately 4.5 miles of "total shoreline" (i.e., shoreline reachable by a combination of vehicle and foot).

Total Shoreline in the Region

Regionally, the length of "total shoreline" (reachable by a combination of vehicle and foot) within the Delta was found to be approximately 380 miles. In addition, the length of "total shoreline" within a 60-minute driving radius was found to be approximately 250 miles. Figure 1 in the 2023 Technical Memorandum shows the miles of "total shoreline" mapped within the Delta region and within a 60-minute driving radius of the Proposed Project Site.

Results of Total Shoreline Analysis

<u>The Proposed Project Site provides access to approximately 4.5 miles of "total shoreline" on Shag</u> <u>Slough Levee and the Reserve. To place this amount in a regional context, the Delta region</u> <u>provides approximately 380 miles of "total shoreline," approximately 250 miles of which are within</u> <u>a 60-minute drive of the Proposed Project Site. Based on these estimates, the Proposed Project</u> <u>would eliminate vehicular or pedestrian access to approximately 1.2% of "total shoreline" within</u> <u>the Delta ((4.5/380)*100 = 1.2) and approximately 1.8% of "total shoreline" within a 60-minute</u> <u>driving radius ((4.5/250)*100 = 1.8). Additionally, this method likely underestimates the amount of</u> <u>shoreline available in the region by an order of magnitude by eliminating from the analysis any</u> <u>roadway farther than 200 feet from a waterway¹⁸; therefore, the estimated reduction in vehicular</u> <u>or pedestrian access to "total shoreline" is likely an overestimate.¹⁹</u>

Available Shoreline for Fishing Opportunities Analysis

<u>Available Shoreline on the Proposed Project Site and Liberty Island Ecological Reserve</u> <u>Recent satellite imagery from Google Earth (taken June 2021) was used to identify "shoreline</u> <u>fishing locations" along Shag Slough Levee and along the remnant levee in the Reserve based</u>

As described in the 2023 Technical Memorandum, the GIS analysis included a "drivable roads" dataset, which was buffered by 200 feet based on an assumption that shoreline reachable by a combination of vehicle and foot would exist within a 200-foot buffer between a drivable roadway and a waterway.

¹⁹ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.

on the absence of dense vegetation that restricts access to the shoreline. On Shag Slough Levee, potential shoreline fishing locations were identified from the Proposed Project Site's northern property boundary to Shag Slough Bridge, as there is a vehicular gate at this location past which fishing is not allowed. At the Reserve, pedestrian access from the Project Site is limited to the eastern Shag Slough levee, both north and south of the Shag Slough Bridge. Potential shoreline fishing locations on the Reserve were identified from the northern "stairstep section," west of a 100-foot breach in the remnant levee (which is impassable to foot traffic) along the remnant levee to a point 0.75 mile south of the Shag Slough Bridge (at this point the informal angler trail becomes overgrown and very difficult to navigate^{20,21}). The total length (in linear feet) of vegetation-free shoreline was then calculated for each shoreline fishing opportunity identified, rounded to the nearest 10 feet.

As described above under *Environmental Setting, Regional Recreation,* a variety of sources were searched to locate specific shoreline fishing locations along Shag Slough Levee and along the remnant levee in the Reserve to validate the shoreline fishing locations identified using satellite imagery. The only source identified that provided specific shoreline fishing locations accessible from the Proposed Project Site was an exhibit from the group Liberty Island Access (LIA), which identified 18 potential shoreline fishing locations along the Reserve's shoreline south of Shag Slough Bridge.²² The length of vegetation-free "available shoreline for fishing opportunities" provided by the potential shoreline fishing locations identified by LIA was calculated and was found to be nearly equivalent to the length of vegetation-free "available shoreline for fishing opportunities" calculated using the recent Google Earth imagery over the same distance.²³

<u>From the Shag Slough Bridge to a point 0.75 mile south of Shag Slough Bridge, 0.14 mile of vegetation-free shoreline was identified, while LIA identified 0.13 mile of vegetation-free shoreline.</u> <u>The LIA exhibit identified one shoreline fishing location north of Shag Slough Bridge, totaling 0.02 mile of vegetation-free shoreline, while 17 shoreline fishing locations were identified based on the method used in the 2023 Technical Memorandum north of Shag Slough Bridge, totaling 0.14 mile of vegetation-free shoreline. Therefore, the total "available shoreline for fishing opportunities" for the Reserve is 0.28 mile (0.14 mile north of the bridge and 0.14 mile south of the bridge). See Appendix A, *Detailed Calculations of Available Shoreline for Fishing Opportunities*, to the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information. Figure 2 in the 2023 Technical Memorandum for more information.</u>

²⁰ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

²¹ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2A. Fishing Locations on Liberty Island Ecological Reserve. December 2021.

²² Liberty Island Access, Appeal Letter to the Delta Stewardship Council of the California Department of Water Resources Delta Plan Consistency Certification of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Exhibit A, "Satellite imagery of recreational facilities at Liberty Island Ecological Reserve," March 2021.

²³ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.

Available Shoreline in the Region

Similar to "total shoreline," to provide accurate context for "available shoreline for fishing opportunities" on the Proposed Project Site and Reserve, the presence of available shoreline must be assessed at a local and/or regional scale. To obtain this information, known shoreline fishing locations located within a 60-minute driving radius of the Proposed Project Site and within the legal Delta boundary (as the analysis was not focused on potential shoreline fishing opportunities *outside* of the Delta, regardless of whether they were within a 60-minute drive of the Proposed Project Site) were obtained using a variety of sources as described under *Environmental Setting, Regional Recreation.* Figure 3 in the 2023 Technical Memorandum displays the limited sample of identified shoreline fishing locations within a 60-minute drive of the Proposed Project Site. The total length (in linear feet) of vegetation-free shoreline was then calculated at each shoreline fishing location identified, rounded to the nearest 10 feet (displayed in Table IV.J-1 above, and in Table 2 in the 2023 Technical Memorandum).

Results of Available Shoreline for Fishing Opportunities Analysis

Based on an analysis of "available shoreline for fishing opportunities," the Proposed Project Site offers approximately 1.46 miles of available shoreline (1.18 miles of shoreline on the west bank of Shag Slough and 0.28 mile on the Reserve), as shown in Table 1 in the 2023 Technical Memorandum. To place this amount in a regional context, there are approximately 22.33 miles of "available shoreline for fishing opportunities" at other known shoreline fishing locations within a 60-minute drive of the Proposed Project Site (Table 2 in the 2023 Technical Memorandum). Because the Proposed Project design will maintain 0.16 mile of the western bank of Shag Slough for shoreline fishing use (between the Proposed Project's northern property line and the northernmost levee breach).²⁴ the Proposed Project would reduce access to approximately 6% of "available shoreline for fishing opportunities" within a 60-minute driving radius ([1.46-0.16]/22.33)*100 = 5.8). Additionally, this method likely underestimates the amount of available shoreline located in the 60-minute driving radius by an order of magnitude, as Table 2 in the 2023 Technical Memorandum provides a limited sample of known fishing locations in the area, but there are over 100 more recorded shoreline fishing locations as well.²⁵ Therefore, the estimated reduction in vehicular or pedestrian access to available shoreline is likely an overestimate.²⁶

²⁴ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021.

²⁵ FISHBRAIN, "Find your best fishing spot" interactive map, accessed January 25, 2023, <u>https://fishbrain.com/explore/.</u>

²⁶ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.

Impact Conclusion

<u>As described above, the Proposed Project Site has approximately 4.5 miles of "total shoreline" on</u> <u>Shag Slough Levee and the Reserve,²⁷ out of which there are approximately 1.46 miles of</u> <u>"available shoreline for fishing opportunities."</u>

The Delta includes over 80,000 acres and more than 1,000 miles of waterways which provide opportunities for shoreline fishing.²⁸ Given the hundreds of publicly recorded fishing spots with logged catches, anglers have generated resources to better navigate the fishing opportunities in the Delta, including many websites, online forums, and videos aimed at helping anglers identify ideal fishing opportunities based on various factors, including the availability of shoreline for fishing. The multitude of shoreline fishing opportunities in the Delta, and the knowledge that one can fish from the shore by walking almost any levee one can find,²⁹ led members of the public recreating at the Proposed Project Site during the 2021 visitor survey to provide 68 alternate unique responses when asked if they fish in other areas of the Delta, including a response of "everywhere in the Delta."³⁰

This sense of abundance from local users of the Proposed Project Site regarding opportunities for shoreline fishing in the Delta is reflected numerically as well. Analysis presented in the 2023 Technical Memorandum shows there are approximately 380 miles of "total shoreline" within the Delta region, 250 miles of which are within a 60-minute drive of the Proposed Project Site and offer approximately 22.33 miles of "available shoreline for fishing opportunities."

As discussed above, the Proposed Project would reduce pedestrian access to approximately 6% of "available shoreline for fishing opportunities" based on the limited sample of local shoreline and pier fishing opportunities provided in Table IV.J-1. If one were to look just at "total shoreline" and not factor in vegetation that restricts opportunities to "available shoreline for fishing opportunities", the Proposed Project would reduce pedestrian access even less: approximately 1.2% of "total shoreline" within the Delta region (4.5 miles/380 miles*100) and approximately 1.8% of "total shoreline" within a 60-minute driving radius of the Proposed Project Site (4.5 miles/250 miles*100).

In addition, the Proposed Project design includes installation of a new boat ramp in the northeastern portion of the Project Site, on the north side of the northern-most breach of the Shag Slough Levee.³¹ The boat ramp would accommodate hand launching of watercraft to provide public access to the Proposed Project's newly created 20 miles of tidal channels, Shag Slough, and the Reserve; thus, while pedestrian access to Shag Slough Levee and the Reserve would be

²⁷ Environmental Science Associates, 2023. Technical Memorandum: Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project and within the Larger Delta Region. April 2023.

²⁸ Fishing Booker Blog, "California Delta Fishing: The Complete Guide," accessed January 23, 2023, <u>https://fishingbooker.com/blog/california-delta-fishing/.</u>

²⁹ Bass Fishing Forum, "Bank Fishing the Delta," accessed January 23, 2023, <u>https://www.westernbass.com/forum/bank-fishing-the-delta-t115991.html/.</u>

³⁰ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2E. Additional Detailed Results from On-Site Visitor Surveys. December 2021.

³¹ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021.

eliminated, the opportunity to fish from the remnant levee system at the Reserve would be maintained. From the new boat ramp, small watercraft could travel approximately 1.45 miles to the Reserve, where an informal hand-launching site (comprised of an earthen berm) is currently used just south of Shag Slough Bridge, and utilize the shoreline for fishing.³²

In summary, the Delta region offers many locations where anglers can fish from the shoreline or a pier. The degree of pedestrian access to shoreline fishing opportunities reduced by the Proposed Project is small compared to the opportunities available locally and in the broader Delta region, as reflected in our analysis presented above and in more detail in the 2023 Technical Memorandum, and the attitudes of local survey respondents and Delta residents. In addition, the Proposed Project design includes installation of a boat ramp, which would maintain public access to the shoreline fishing opportunities provided by the Reserve and would provide access to 20 miles of navigable channels created by the Proposed Project that do not exist today.³³ These navigable channels would be accessible to watercraft users for fishing but would not provide any new shoreline fishing opportunities. The loss of shoreline fishing for pedestrians at the Reserve is small in comparison to other opportunities in the Delta for fishing from a bankshoreline or pier. Therefore, impacts of the Proposed Project would not exceed the applicable threshold of significance related to a decrease in opportunities to fish from the shoreline within the Delta region and the Proposed Project's impact with regard to this threshold would be **less than significant**.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Proposed Project impacts related to recreation would be *less-than-significant*. No mitigation is required.

³² Liberty Island Access, Appeal Letter to the Delta Stewardship Council of the California Department of Water Resources Delta Plan Consistency Certification of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Exhibit A, "Satellite imagery of recreational facilities at Liberty Island Ecological Reserve," March 2021.

³³ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021.



memorandum

date	April 17, 2023
to	Stephanie Freed, Ecosystem Investment Partners, Assistant Director of Operations, Project Manager
сс	David Urban, Ecosystem Investment Partners, Managing Director
from	Rachael Carnes, Environmental Science Associates, Managing Planner
subject	Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Background

The Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Proposed Project) consists of developing over 3,000 acres of freshwater tidal marsh in the Cache Slough Complex, located in the northern Sacramento-San Joaquin Delta (Delta). The Proposed Project involves breaching the Shag Slough Levee to restore freshwater tidal connectivity in conjunction with grading to create a mosaic of subtidal, intertidal/marsh, and floodplain habitat.

The Final Environmental Impact Report (Final EIR) for the Proposed Project was certified by the California Department of Water Resources (DWR) on November 2, 2020. Four petitions were filed challenging the certification of the Final EIR, which were consolidated. The Superior Court of the State of California for the County of Contra Costa (Court) heard oral arguments in the case on October 11, 2022, and the Court then took the matter under submission. On November 17, 2022, the Court issued a Peremptory Writ of Mandate ordering DWR to decertify that portion of the Final EIR for the Proposed Project regarding the Proposed Project's potential impact on recreational opportunities to fish from the shoreline (the Shoreline Fishing Opportunities Threshold). The Peremptory Writ also ordered that, prior to recertifying the Final EIR, DWR bring the Final EIR into compliance with the California Environmental Quality Act (CEQA) with respect to the Final EIR's discussion and analysis of the Shoreline Fishing Opportunities Threshold.

On November 18, 2022, Environmental Science Associates (ESA) was requested by Ecosystem Investment Partners (EIP) to assess shoreline fishing opportunities provided by the Proposed Project Site and the availability of shoreline fishing opportunities in the local vicinity and in the larger Delta region. There are multiple reasonably foreseeable interpretations of what constitutes an *opportunity* to fish from the shoreline; therefore, ESA evaluated shoreline fishing opportunities at the Proposed Project Site and in the region using two distinct methods: one method calculated "total shoreline" reachable by a combination of vehicle and foot, regardless of whether the degree of vegetation cover provides access to the waterway, while the other method assessed "available shoreline for fishing opportunities" (i.e., shoreline free of dense vegetation such that it provides a realistic opportunity to fish). Both methods are described in further detail below. Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Methods

Total Shoreline

Total Shoreline on the Proposed Project Site and Liberty Island Ecological Reserve

The Proposed Project Site is currently used by pedestrians to access shoreline fishing opportunities on the west bank of Shag Slough (along Liberty Island Road atop Shag Slough Levee) as well as the east bank of Shag Slough (within the Liberty Island Ecological Reserve [Reserve] accessed via the Shag Slough Bridge). The total length of the Shag Slough Levee on the Proposed Project Site with the potential to offer shoreline fishing opportunities is approximately 1.5 miles, running from the northern property boundary to the Shag Slough Bridge (there is a vehicular gate at Shag Slough Bridge with signage posted marking "no trespassing" and "private property," past which fishing is not allowed). The total length of remnant levee within the Reserve with the potential to offer shoreline fishing opportunities is approximately 3 miles. Therefore, the Proposed Project Site provides access to approximately 4.5 miles of "total shoreline" (i.e., shoreline reachable by a combination of vehicle and foot).

Total Shoreline in the Region of the Proposed Project Site

To provide accurate context for "total shoreline" on the Proposed Project Site and Reserve, the presence of shoreline must be assessed at a local and/or regional scale. For the purposes of this analysis, "regional scale" was defined as the area within the legal boundary of the Delta. In addition, a 2014 California Department of Parks and Recreation statewide recreation survey found that the majority of recreationists in California travel between 21 and 60 minutes to the places they visit most often for recreation.¹ Therefore, this analysis has defined "local scale" as the area within a 60-minute drive of the Proposed Project Site.

ESA established the following protocol using a geographic information system (GIS) to assess the amount of "total shoreline" that exists locally and regionally. As described above, "total shoreline" is defined as shoreline reachable by a combination of vehicle and foot; therefore, ESA used geospatial analysis to identify shoreline within a 200-foot buffer of easily reachable, drivable roadways. The methods used to focus the geospatial analysis are further explained below:

- The U.S. Census Bureau's Topologically Integrated Geographic Encoding and Referencing system (TIGER) roads dataset was used and filtered to retain only "named roads." Doing so excludes agricultural and other private roads that would not provide vehicular access. Interstates were also removed from the dataset due to the assumption that the majority of interstates do not provide safe and/or desirable shoreline fishing opportunities even if they are located near waterways. The resulting dataset can be described as "drivable roads."
- A "waterways" dataset was derived from the Delta Plan waterways dataset (which includes all open water channels in the Delta), but ESA staff manually edited this layer to exclude shoreline along small islands, edges of marsh, and other waterways that would not be reachable by vehicle or accommodate fishing.
- The "waterways" data was then filtered to retain only those waterways within 200 feet of "drivable roads," based on an assumption that shoreline reachable by a combination of vehicle and foot would exist within a 200-foot buffer between a drivable roadway and a waterway. The analysis was limited to 200 feet in order to

¹ California State Parks, "Survey on Public Opinions and Attitudes on Outdoor Recreation in California," January 2014

avoid the inclusion of shoreline on the opposite side of narrow waterways from the location of the identified "drivable roads."

- To examine the amount of "total shoreline" present at a regional scale, the length of shoreline within 200 feet of drivable roads was calculated within the boundary of the legal Delta.
- To examine the amount of "total shoreline" present at a local scale, the length of shoreline within 200 feet of drivable roads was calculated within a 60-minute driving radius.
- The boundary for the "60-minute driving radius" was created by establishing 20 points radiating in all directions from the northeast corner of the Proposed Project site that were each a 60-minute drive according to Google Earth drive times under average traffic conditions. These points were then connected to establish a perimeter. That perimeter was then clipped to the legal Delta boundary, establishing an area around the Proposed Project site of Delta within a 60-minute drive.

Based on this protocol, the length of "total shoreline" within the legal Delta was found to be approximately 380 miles. In addition, the length of "total shoreline" within a 60-minute driving radius was found to be approximately 250 miles. **Figure 1** displays the "total shoreline" mapped within the legal Delta and within a 60-minute driving radius of the Proposed Project Site.



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Available Shoreline for Fishing Opportunities

Available Shoreline for Fishing Opportunities on the Proposed Project Site and Liberty Island Ecological Reserve

ESA also examined "available shoreline for fishing opportunities" provided by the Proposed Project Site, which is defined as shoreline reachable by foot and free of dense vegetation such that it provides a realistic opportunity to fish from the bank. The absence of vegetation was used as the key indicator of "available shoreline for fishing opportunities" due to an angler's need for space to cast a fishing line and for a clear walkway to approach the waterway for fish recovery.

Recent satellite imagery from Google Earth (taken June 2021) was used to identify potential shoreline fishing locations along Shag Slough Levee and along the remnant levee in the Reserve based on the absence of dense vegetation. On Shag Slough Levee, potential shoreline fishing locations were identified from the Proposed Project Site's northern property boundary to Shag Slough Bridge, as there is a vehicular gate at this location past which fishing is not allowed. At the Reserve, potential shoreline fishing locations were identified from the northern "stairstep section," west of a 100-foot breach in the remnant levee (which is assumed impassable) along the remnant levee to a point 0.75 mile south of the Shag Slough Bridge (at this point the informal angler trail becomes overgrown and very difficult to navigate^{2,3}). The total length (in linear feet) of vegetation-free shoreline was then calculated for each potential shoreline fishing location identified, rounded to the nearest 10 feet.

A variety of sources were searched to locate specific shoreline fishing locations along Shag Slough Levee and along the remnant levee in the Reserve to validate the shoreline fishing locations identified using satellite imagery, including: the Delta Protection Commission's Inventory of Recreation Facilities in the Delta,⁴ the Delta Stewardship Council's Delta Plan,⁵ CDFW⁶ and City and County Parks Department webpages, Delta fishing maps,⁷ and online angler's forums and crowd-sourced lists of fishing spots.^{8,9,10,11,12} The only source identified that provided specific shoreline fishing locations reachable from the Proposed Project Site was an exhibit from the group Liberty Island Access (LIA), which identified 18 potential shoreline fishing locations along the Reserve's shoreline south of Shag Slough Bridge.¹³ ESA calculated the length of vegetation-free shoreline

² Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

³ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2A. Fishing Locations on Liberty Island Ecological Reserve. December 2021.

⁴ Delta Protection Commission, "2015 Inventory of Recreation Facilities in the Sacramento-San Joaquin Delta," 2015.

⁵ Delta Stewardship Council, "The Delta Plan."

⁶ California Department of Fish and Wildlife, "Places to Visit," accessed January 25, 2023, https://wildlife.ca.gov/Lands/Places-to-Visit/.

Franko Maps, "California Delta Adventure Guide: Map and Guide to the San Joaquin and Sacramento River for Boaters, Fishermen & Delta Visitors," 2021.

⁸ California Delta Chambers & Visitor's Bureau, "Delta Fishing Holes," accessed October 17, 2019, https://californiadelta.org/fishing/delta-fishing-holes/.

⁹ Sacramento-San Joaquin Delta National Heritage Area, "Delta Fishing," accessed January 25, 2023, https://visitcadelta.com/what-todo/fishing/.

¹⁰ FISHBRAIN, "Find your best fishing spot" interactive map, accessed January 25, 2023, https://fishbrain.com/explore/.

¹¹ YouTube "Best Bank Fishing Spots on the CA Delta," accessed January 24, 2023, https://youtube.com/watch?v=bA_5hLaciJo/.

¹² Fishing Booker Blog, "California Delta Fishing: The Complete Guide," accessed January 23, 2023, https://fishingbooker.com/blog/california-delta-fishing/.

¹³ Liberty Island Access, Appeal Letter to the Delta Stewardship Council of the California Department of Water Resources Delta Plan Consistency Certification of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Exhibit A, "Satellite imagery of recreational facilities at Liberty Island Ecological Reserve," March, 2021.

Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

provided by the shoreline fishing locations identified by LIA and found that it was nearly equivalent to the length of vegetation-free shoreline calculated by ESA over the same distance. From the Shag Slough Bridge to a point 0.75 mile south of Shag Slough Bridge, ESA identified 0.14 mile of vegetation-free shoreline, while LIA identified 0.13 mile of vegetation-free shoreline. The LIA exhibit identified one shoreline fishing location north of Shag Slough Bridge, providing 0.02 mile of vegetation-free shoreline, while ESA identified 17 shoreline fishing locations north of Shag Slough Bridge, providing 0.14 mile of vegetation-free shoreline. See Appendix A, *Detailed Calculations of Available Shoreline for Fishing Opportunities*, for more information.

Figure 2 displays shoreline fishing locations identified along the Shag Slough Levee and within the Reserve. **Table 1** displays the length of vegetation-free "available shoreline for fishing opportunities" calculated at each location.

Shoreline Fishing Location ID (See Figure 2)	Approximate Length of "Available Shoreline" (Linear Feet)	Shoreline Fishing Location ID (See Figure 2)	Approximate Length of "Available Shoreline" (Linear Feet)	Shoreline Fishing Location ID (See Figure 2)	Approximate Length of "Available Shoreline" (Linear Feet)	
1	50	13	70	25	50	
2	30	14	20	26	30	
3	30	15	110	27	50	
4	40	16	50	28	60	
5	40	17	60	29	20	
6	20	18	10	30	50	
7	30	19	10	31	40	
8	30	20	20	32	70	
9	40	21	50	33	30	
10	30	22	100	34	5,680	
11	40	23	80	35	130	
12	30	24	70	36	430	

 Table 1

 Length of "Available Shoreline for Fishing Opportunities" at Identified Shoreline Fishing Locations on the Proposed Project Site and Liberty Island Ecological Reserve

Total Length of Available Shoreline at the Reserve (ID 1-33): 1,460 feet (0.28 mile)

Total Length of Available Shoreline along Shag Slough Levee (ID 33-36): 6,240 feet (1.18 miles)

Total Length of Available Shoreline Provided by the Proposed Project Site: 7,700 feet (1.46 miles)



Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Available Shoreline for Fishing Opportunities in the Region of the Proposed Project Site

To provide accurate context for the amount of "available shoreline for fishing opportunities" on the Proposed Project Site and the Reserve, the extent of available shoreline must be assessed at a local and/or regional scale. To accomplish this, ESA identified potential shoreline fishing locations located within a 60-minute driving radius of the Proposed Project Site that were also within the legal Delta boundary (as the analysis was not focused on potential shoreline fishing opportunities *outside* of the Delta, regardless of whether they were within a 60-minute drive of the Proposed Project Site). For an explanation as to why a 60-minute-drive geographic boundary was utilized, please see the discussion under *Total Shoreline in the Region of the Proposed Project Site*.

ESA identified potential shoreline fishing locations from a variety of sources, including the Delta Protection Commission's Inventory of Recreation Facilities in the Delta¹⁴, the Delta Stewardship Council's Delta Plan¹⁵, and CDFW¹⁶ and City and County Parks Department webpages, as well as unofficial sources such as online angler's forums and crowd-sourced lists of fishing spots.^{17,18,19,20,21} The latter was included due to the popular use of waterways, levees, and bridges throughout the Delta as informal recreational facilities. In addition, in-person visitor surveys were conducted at the Proposed Project Site in September/October 2021.²² Question 8 of the 2021 in-person visitor survey asked respondents if they fish in other locations in the Delta; the responses to this question were used to identify additional commonly known potential shoreline fishing locations within a 60minute drive of the Proposed Project Site.²³

Recent satellite imagery from Google Earth (taken June 2021) was used to identify "available shoreline for fishing opportunities" at each potential shoreline fishing location examined. Based on the absence of dense vegetation, the total length (in linear feet) of vegetation-free shoreline was calculated at each potential shoreline fishing location identified (pier fishing opportunities were included in this total, accounting for 4.7% of the overall total length of available shoreline).

Figure 3 displays identified potential shoreline fishing locations within the Delta and within a 60-minute driving radius of the Proposed Project Site. **Table 2** displays the length of "available shoreline for fishing opportunities" calculated at each location.

17 California Delta Chambers & Visitor's Bureau, "Delta Fishing Holes," accessed October 17, 2019, https://californiadelta.org/fishing/delta-fishing-holes/.

¹⁴ Delta Protection Commission, "2015 Inventory of Recreation Facilities in the Sacramento-San Joaquin Delta," 2015.

¹⁵ Delta Stewardship Council, "The Delta Plan."

¹⁶ California Department of Fish and Wildlife, "Places to Visit," accessed January 25, 2023, https://wildlife.ca.gov/Lands/Places-to-Visit/.

¹⁸ Sacramento-San Joaquin Delta National Heritage Area, "Delta Fishing," accessed January 25, 2023, https://visitcadelta.com/what-todo/fishing/.

¹⁹ FISHBRAIN, "Find your best fishing spot" interactive map, accessed January 25, 2023, https://fishbrain.com/explore/.

²⁰ YouTube "Best Bank Fishing Spots on the CA Delta," accessed January 24, 2023, https://youtube.com/watch?v=bA 5hLaciJo/.

²¹ Fishing Booker Blog, "California Delta Fishing: The Complete Guide," accessed January 23, 2023, https://fishingbooker.com/blog/california-delta-fishing/.

²² Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2 – Technical Analysis – Consistency with Policy G P1(b)(3) Best Available Science Methods Used to Estimate Recreational Use. December 2021.

²³ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 2E. Additional Detailed Results from On-Site Visitor Surveys. December 2021.

Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Table 2 Length of "Available Shoreline for Fishing Opportunities" at Identified Shoreline Fishing Locations in the Delta within 60-minute Drive of Proposed Project Site

Shoreline Fishing Location ID (See Figure 3)	Location Name	Approximate Length of "Available Shoreline" (Linear Feet)	
1	Big Break Regional Shoreline	3,280	
2	Cliffhouse Fishing Access	250	
3	Hogback Island Recreation Facility	2,540	
4	Sandy Beach County Park	1,050	
5	Westgate Landing Regional Park	360	
6	Garcia Bend Park	870	
7	Sherman Island Public Access	2090	
8	Rio Vista Fishing Pier	560	
9	Georgiana Slough Fishing Access	420	
10	Brannan Island State Recreation Area	2,880	
11	Antioch Fishing Pier	860	
12	Antioch Downtown Fishing Pier	2,150	
13	"The Dairy"	2,000	
14	"The Power Lines"	2,000	
15	"The Dump Gate"	650	
16	"The Windmill"	50	
17	"Tennessee's Spot"	820	
18	"The Patio"	600	
19	Pittsburg Pier	1,940	
20	Calhoun Cut Ecological Reserve	7,790	
21	Isleton River Fishing Spot	410	
22	Isleton Public Dock	250	
23	760 River Road Shoreline Fishing	390	
24	North Point Way River Access	3,760	
25	Barge Canal Recreation Access	120	
26	Miller Regional Park	2,120	
27	River Walk Pier	1,250	
28	The Barges	7,750	
29	Dutch Slough	8,550	
30	Little Franks Tract	5,870	
31	Maine Prairie Slough	520	
32	Alamo Creek	4,590	
33	Kirker Creek	1,300	
34	Ulatis Creek	3,520	
35	Sacramento Deep Water Ship Channel	2,560	
36	Egbert Cut	1,890	

Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Shoreline Fishing Location ID (See Figure 3)	Location Name	Approximate Length of "Available Shoreline" (Linear Feet)			
37	Elk Slough	700			
38	Sacramento Drainage Canal	990			
39	Reclamation District 551 Borrow Canal	2,430			
40	North Stone Lake	2,740			
41	Big Lake	3,550			
42	Main Canal	1,090			
43	Tule Canal	2,630			
44	Toe Drain	4,760			
45	Winchester Lake	4,370			
46	Greens Lake	110			
47	Freeport	930			
48	Prospect Island-Miner Slough	4,390			
49	Wimpys Marina	300			
50	Arrowhead Launch	490			
51	BW Marina	470			
52	Hastings Island	2,600			
53	Montezuma	2,460			
54	Ryer Island	4,890			
Total Length of Available Shoreline in the Region of the Proposed Project Site: 117,910 feet (22.33 miles)					



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Assessment of Shoreline Fishing Opportunities at the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Site and within the Larger Delta Region

Conclusions

Total Shoreline

ESA evaluated "total shoreline" provided by the Proposed Project Site, the Reserve, and in the local and regional area of the Proposed Project Site. This method of examining "shoreline fishing opportunities" considers the total length of shoreline reachable by a combination of vehicle and foot, regardless of whether the degree of vegetation cover provides clear access to the waterway.

Using this method of calculation, The Proposed Project Site provides access to approximately 4.5 miles of "total shoreline" on Shag Slough Levee and the Reserve. To place this amount in a regional context, the Delta region provides approximately 380 miles of "total shoreline", approximately 250 miles of which are within a 60-minute drive of the Proposed Project Site. Based on these numbers, the Proposed Project would reduce vehicular or pedestrian access to approximately 1.2% of "total shoreline" within the Delta ((4.5/380)*100 = 1.2) and approximately 1.8% of "total shoreline" within a 60-minute driving radius ((4.5/250)*100 = 1.8). Additionally, this method likely underestimates the amount of "total shoreline" present in the region by an order of magnitude by eliminating from the analysis any roadway farther than 200 feet from a waterway; therefore, the estimated reduction in vehicular or pedestrian access to "total shoreline" due to the Proposed Project is likely an overestimate.

Available Shoreline for Fishing Opportunities

ESA evaluated "available shoreline for fishing opportunities" provided by the Proposed Project Site, the Reserve, and in the local and regional area of the Proposed Project Site. This method of examining "shoreline fishing opportunities" considers shoreline free of dense vegetation such that it provides a realistic opportunity to fish.

This method of calculation relied upon an assessment of available datasets identifying potential shoreline fishing locations and current Google Earth imagery examined for the absence of dense vegetation. Based on this, the Proposed Project Site offers approximately 1.46 miles of "available shoreline for fishing opportunities" (1.18 miles of shoreline on the west bank of Shag Slough and 0.28 mile on the Reserve), as shown in Table 1. To place this amount in a regional context, there are approximately 22.33 miles of "available shoreline for fishing opportunities" at other known potential shoreline fishing locations within a 60-minute drive of the Proposed Project Site (Table 2). Because the Proposed Project design will maintain 0.16 mile of the western bank of Shag Slough for shoreline fishing use (between the Proposed Project's northern property line and the northernmost levee breach),²⁴ the Proposed Project would reduce access to approximately 6% of "available shoreline for fishing opportunities" within a 60-minute driving radius (((1.46-0.16)/22.33)*100 = 5.8). Additionally, this method likely underestimates the amount of "available shoreline for fishing opportunities" located in the area by an order of magnitude, as Table 2 provides a limited sample of known potential shoreline fishing locations in the area, but there are over 100 more recorded shoreline fishing locations as well.²⁵ Therefore, the estimated reduction in vehicular or pedestrian access to "available shoreline for fishing opportunities" due to the Proposed Project is likely an overestimate.

²⁴ Department of Water Resources, Delta Plan Consistency Re-Certification for the Lookout Slough Tidal Habitat Restoration and Flood Improvement: Attachment 4 – Public Access Summary. December 2021.

²⁵ FISHBRAIN, "Find your best fishing spot" interactive map, accessed January 25, 2023, https://fishbrain.com/explore/.

Appendix A. Detailed Calculations of Available Shoreline for Fishing Opportunities

Environmental Science Associates (ESA) Measurements

Map ID	KMZ TITLE	Where Found	Shoreline Ft	Pier Ft	Total Ft	Miles	Notes
Accessible from Proj	ect Site (Shag Slough Levee and	LIER)					
LIER Available Shoreline		,					
17	LIER NorthBank0	GoogleEarth	60				
16	LIER NorthBank1	GoogleEarth	50				
15	LIER NorthBank2	GoogleEarth	110				
14	LIER NorthBank3	GoogleEarth	20				
13	LIER NorthBank4	GoogleEarth	70				
12	LIER NorthBank5	GoogleEarth	30				
11	LIER NorthBank6	GoogleEarth	40				
10	LIER NorthBank7	GoogleEarth	30				
9	LIER NorthBank8	GoogleEarth	40				
8	LIER NorthBank9	GoogleEarth	30				
7	LIER NorthBank10	GoogleEarth	30				
6	LIER NorthBank11	GoogleEarth	20				
5	LIER NorthBank12	GoogleEarth	40				
4	LIER NorthBank13	GoogleEarth	40				
3	LIER NorthBank14	GoogleEarth	30				
2	LIER NorthBank15	GoogleEarth	30				
1	LIER NorthBank16	GoogleEarth	50				Path blocked by 100 ft gap after this point.
TOTAL LIER North Bank	-	0	720			0.136364	, , , , , , ,
							WRA surveyors found the informal analer trail to
							he overarown after 0.75 mile south of hridae. All
18	LIER SouthBank0	GoogleEarth	10				points listed are north of this marker
19	LIER_SouthBank1	GoogleEarth	10				points instea are not ar of and marken
20	LIER SouthBank2	GoogleEarth	20				
21	LIER_SouthBank3	GoogleEarth	50				
22	LIER SouthBank4	GoogleEarth	100				
22	LIER_SouthBank5	GoogleEarth	80				
23	LIER_SouthBank6	GoogleEarth	70				
25	LIER_SouthBank7	GoogleEarth	50				
26	LIER_SouthBank8	GoogleEarth	30				
20	LIER_SouthBank9	GoogleEarth	50				
28	LIER_SouthBank10	GoogleEarth	60				
29	LIER_SouthBank11	GoogleEarth	20				
30	LIER_SouthBank12	GoogleEarth	50				
31	LIER_SouthBank13	GoogleEarth	40				
32	LIER_SouthBank14	GoogleEarth	70				
32	LIER_SouthBank15	GoogleEarth	30				
TOTAL LIER South Bank	Elen_ooddiballkio	Googlezanti	740			0 140152	
LIER Total Shoreline Availal	ble		1460	1		0.276515	
West Shag Slough Available	Shoreline						
34	WestShag1	GoogleEarth	5680				
35	WestShag2	GoogleEarth	130				
36	WestShag3	GoogleEarth	430				
TOTAL West Shag Slough			6240			1.181818	
Total Available from Project	t Site		7700	1		1.458333	
Within 60-minute Dr	ive of Project Site						
Fishing Locations from FIR	(within 60 minute driving radius)						
1	BigBreakRegionalShoreline	FIR	3100	180	3280		
2	CliffhouseFishingAccess	FIR	250	100	250		
3	HoghackIslandBecreationEacility	FIR	2400	140	2540		
4	SandyBeachCountyPark	FIR	950	100	1050		
5	Westgatel and ing Regional Park	FIR	200	160	360		
-	GarciaBendPark	EIR	800	70	870		
7	ShermanislandPublicAccess	FIR	2000	90	2090		
8	BioVistaFishingPier	FIR	390	170	560		
9	GeorgianaSloughEishingAccess	FIR	420	1/0	420		
10	BrannanislandStateRecreationArea	FIR	2 800	80	2880		
11	AntiochFishingPier	FIR	340	520	860		
12	AntiochDowntownFishingPier	FIR	1670	480	2150		
13	"The Dairy"	FIR	2000	.00	2000		
14	"The Power Lines"	FIR	2000		2000		
15	"The Dump Gate"	EIR	650		650		
16	"The Windmill"	EIR	550	50	50		
17	"Tennessee's Spot"	EIR	820	50	820		
18	"The Patio"	EIR	600		600		
TOTAL			21390	2040	23430	4,4375	
Fishing Locations Found Or	nline (within 60 minute driving radius)						
19	PittsburgPier	https://apps.wildlif	e.ca.gov/fishing	/ 1940	1,940		
20	CalhounCutEcologicalReserve	https://wildlife.ca.g	7790		7,790		
21	IsletonRiverFishingSpot	Delta Fishing - Visit	t 410		410		
22	IsletonPublicDock	Delta Fishing - Visit	the California D	e 250	250		
23	760RiverRoadShorelineFishing	Delta Fishing - Visit	t 390		390		
24	NorthPointWayRiverAccess	Delta Fishing - Visit	t 3760		3,760		

25	BargeCanalRecreationAccess	Delta Fishing - Visit t	120		120	
26	MillerRegionalPark	Delta Fishing - Visit t	2120		2,120	
27	RiverWalkPier	Delta Fishing - Visit t	650	600	1,250	
28	TheBarges	https://www.youtub	7750		7,750	
29	DutchSlough	https://www.youtub	8550		8,550	
30	LittleFranksTract	https://www.youtub	5870		5,870	
31	MainePrairieSlough	https://fishbrain.co	520		520	
32	AlamoCreek	https://fishbrain.co	4590		4,590	
33	KirkerCreek	https://fishbrain.co	1300		1,300	
34	UlatisCreek	https://fishbrain.co	3520		3,520	
35	SacramentoDeepWaterShipChannel	https://fishbrain.co	2560		2,560	
36	EgbertCut	https://fishbrain.co	1890		1,890	
37	ElkSlough	https://fishbrain.co	700		700	
38	SacramentoDrainageCanal	https://fishbrain.co	990		990	
39	ReclamationDistrict551BorrowCanal	https://fishbrain.co	2430		2,430	
40	NorthStoneLake	https://fishbrain.co	2740		2,740	
41	BigLake	https://fishbrain.co	3550		3,550	
42	MainCanal	https://fishbrain.co	1090		1,090	
43	TuleCanal	https://fishbrain.co	2630		2,630	
44	ToeDrain	https://fishbrain.co	4760		4,760	
45	WinchesterLake	https://fishbrain.co	4370		4,370	
46	GreensLake	https://fishbrain.co	110		110	
Total			75,160	2790	77950	14.76326
Alternate Fishing Locations	s Noted by Survey Respondents in DSC Pro	ocess (within 60 minute driv	ving radius)			
47	2E_Freeport	Attachment 2E	930		930	
48	2E_ProspectIsland-MinerSlough	Attachment 2E	4390		4,390	
49	2E_WimpysMarina	Attachment 2E		300	300	
50	2E_ArrowheadLaunch	Attachment 2E	100	390	490	
51	2E_BW_Marina	Attachment 2E	470		470	
52	2E_HastingsIsland	Attachment 2E	2600		2,600	
53	2E_Montezuma	Attachment 2E	2460		2,460	
54	2E_RyerIsland	Attachment 2E	4890		4,890	
Total			15840	690	16530	3.130682
Total for all fishing location	ns within 60 minute driving radius		112390	5520	117910	22.33144
Percent shoreline fishing b	eing removed by Project					5.813926

Citations

https://californiadelta.org/fishing/delta-fishing-holes/

Delta Fishing - Visit the California Delta (visitcadelta.com)

https://fishbrain.com/explore?fib-ex-dv=fishing-water&fib-ex-dv-id=QaAi8FZW&fib-ex-lat=38.03490716372565&fib-ex-lng=-121.71510352305256&fib-ex-z=12.532294422542437

https://www.youtube.com/watch?v=bA_5hLaciJo https://www.youtube.com/watch?v=EI5E42euSLk

https://fishingbooker.com/blog/california-delta-fishing/

Liberty Island Access (LIA) Measurements

KMZ Title	Where Found	Shoreline Ft	Miles	Notes
				This point is directly north of Shag Slough
				Bridge. All other points are south of the
LIA_1	LIA Appeal Letter to DSC, Exhibit A	130		Bridge.
Total LIER N	orth Bank	130	0.024621	
LIA_2	LIA Appeal Letter to DSC, Exhibit A	80		
LIA_3	LIA Appeal Letter to DSC, Exhibit A	190		
LIA_4	LIA Appeal Letter to DSC, Exhibit A	90		
LIA_5	LIA Appeal Letter to DSC, Exhibit A	80		
LIA_6	LIA Appeal Letter to DSC, Exhibit A	90		
LIA_7	LIA Appeal Letter to DSC, Exhibit A	50		
				0.75-mile marker directly south of this
				point. All locations south of this point are
				inaccessible according to ground-truthed
LIA_8	LIA Appeal Letter to DSC, Exhibit A	110		evidence.
Total LIER So	outh Bank	690	0.130682	
LIA_9	LIA Appeal Letter to DSC, Exhibit A	110		
LIA_10	LIA Appeal Letter to DSC, Exhibit A	110		
LIA_11	LIA Appeal Letter to DSC, Exhibit A	130		
LIA_12	LIA Appeal Letter to DSC, Exhibit A	170		
LIA_13	LIA Appeal Letter to DSC, Exhibit A	210		
LIA_14	LIA Appeal Letter to DSC, Exhibit A	130		
LIA_15	LIA Appeal Letter to DSC, Exhibit A	360		
LIA_16	LIA Appeal Letter to DSC, Exhibit A	360		
LIA_17	LIA Appeal Letter to DSC, Exhibit A	380		
LIA_18	LIA Appeal Letter to DSC, Exhibit A	410		
Total LIER So	outh of 0.75-mile Marker (Inaccessible)	2370	0.448864	

Citations

Liberty Island Access, Appeal Letter to the Delta Stewardship Council of the California Department of Water Resources Delta Plan Consistency Certification of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Exhibit A, "Satellite imagery of recreational facilities at Liberty Island Ecological Reserve," March, 2021.

Appendix B Exhibits for Comment Letters 2 and 3

- B-1 Letter 2: Central Delta Water Agency, Exhibit 1
- B-2 Letter 2: Central Delta Water Agency, Exhibit 2
- B-3 Letter 2: Central Delta Water Agency, Exhibit 3
- B-4 Letter 3: Liberty Island Access, Attachment 1
- B-5 Letter 3: Liberty Island Access, Attachment 2
- B-6 Letter 3: Liberty Island Access, Attachment 2B
- B-7 Letter 3: Liberty Island Access, Attachment 2E
- B-8 Letter 3: Liberty Island Access, Attachment 4

B-1 Letter 2: Central Delta Water Agency, Exhibit 1

THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR THE COUNTY OF CONTRA COSTA

DATE: November 17, 2022 JUDGE: Edward G. Weil DEPARTMENT: 39 CLERK: Denese Johnson UNREPORTED

CITY OF VALLEJO, Petitioner(s),

vs.

STATE OF CALIFORNIA STATE DEPARTMENT OF WATER RESOURCES, Respondent(s). Case No.: MSN21-0558 (MSN21-0559, MSN21-0560, MSN21-0561)

STATEMENT OF DECISION

The Court heard oral argument in this case on October 11, 2022 and then took the matter under submission. After considering all documents filed in this case, along with oral argument, the Court rules as follows:

I. Background

This is a CEQA case involving challenges to a tidal restoration project in Lookout Slough in the Delta. The Project would convert 3,164 acres of agricultural land into tidal marsh by breaching an existing levee and constructing and improving other levees. The Project will help satisfy the Department's obligations to restore approximately 8,000 acres of tidal marsh as required by the United States Fish and Wildlife Service's 2008 Delta Smelt Biological Opinion (BiOp) and will be consistent with RPA I.6.1 of the 2009 National Marine Fisheries Service Salmonid BiOp. The Project is designed to create habitat for Delta Smelt, longfin Smelt, Steelhead, Sacramento Splittail, Chinook salmon, giant garter snake, and other species. The Project would also widen a portion of the Yolo Bypass to increase flood storage and conveyance, increase the resilience of levees, and reduce flood risk.

Respondent, the State of California State Department of Water Resources (the Department) certified the FEIR for the Project on November 2, 2020. Four petitions were filed challenging the certification of the FEIR. The petitions were consolidated. All Petitioners filed joint opening and reply briefs and Respondents and Real Party filed a joint opposition brief.

The Petitioners are City of Vallejo (MSN21-0558), Central Delta Water Agency (MSN21-0560), Reclamation District No. 2060 and Reclamation District No. 2068 (MSN21-0559) and Solano County Water Agency, Inc. (MSN21-0561). Ecosystem Investment Partners, LLC was named as the real party of interest in two of the cases (MSN21-0560 and MSN21-0559).

II. Standard of Review

Under CEQA, the Court's role is to determine whether the agency has prejudicially abused its discretion, which means that it "has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." (Pub. Res. Code, § 21168.5.) A review of whether correct procedures were followed is de novo, while the substantive factual conclusions are given deference. (*Ebbetts Pass Forest Watch v. Cal. Dep't of Forestry & Fire Prot.* (2008) 43 Cal.4th 936, 944.) An agency's decision to certify an EIR is presumed correct. (*San Diego Citizenry Group v. Cty. Of San Diego* (2013) 219 Cal.App.4th 1, 11.)

"The substantial evidence standard is applied to conclusions, findings and determinations. It also applies to challenges to the scope of an EIR's analysis of a topic, the methodology used for studying an impact and the reliability or accuracy of the data upon which the EIR relied because these types of challenges involve factual questions. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1198.) It also applies "to factual dispute(s) over whether adverse effects have been mitigated or could be better mitigated." (*Oakland Heritage Alliance v. City of Oakland* (2001) 195 Cal.App.4th 884, 898 [internal quotations and citations omitted].) According to the CEQA Guidelines, substantial evidence is "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines, § 15384.)

On the other hand, whether an EIR "is insufficient because it lacks analysis ... is not a substantial evidence question." (*Sierra Club v. Fresno County* (2018) 6 Cal.5th 502, 514-515.) "The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.' [Citations.] The inquiry presents a mixed question of law and fact. As such, it is generally subject to independent review. However, underlying factual determinations—including, for example, an agency's decision as to which methodologies to employ for analyzing an environmental effect—may warrant deference. [Citations.] Thus, to the extent a mixed question requires a determination whether statutory criteria were satisfied, de novo review is appropriate; but to the extent factual questions predominate, a more deferential standard is warranted. [Citations.]" (*Id. at* 515-517.) "Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." (*Ibid.*)

An EIR must include an analysis of significant environmental impacts that will result from the project in both the short term and the long term. (CEQA Guidelines § 15126.2(a).) In addition, an EIR must analyze certain indirect impacts. " 'In evaluating the significance of the environmental effect of a project, the lead agency shall consider ... reasonably foreseeable indirect physical changes in the environment which may be caused by the project.' (CEQA Guidelines, § 15064, subd. (d).) 'An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. ...' (CEQA Guidelines, § 15064, subd. (d)(2).) 'An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.' (CEQA Guidelines, § 15064, subd. (d)(3).)" (*City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 478-479.)

III. CEQA Claims

A. Recirculation of the EIR

Petitioners argue that the FEIR contained significant new information and consequently, the Department was required to recirculate.

"[R]ecirculation is required, for example, when the new information added to an EIR discloses: (1) a new substantial environmental impact resulting from the project or from a new mitigation measure proposed to be implemented [citation]; (2) a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance [citation]; (3) a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which the project's proponents decline to adopt [citation]; or (4) that the draft EIR was so fundamentally and basically inadequate and conclusory in nature that public comment on the draft was in effect meaningless [citation]."(Laurel Heights Improvement Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1129-1130 (Laurel Heights II); see also CEQA Guidelines, §15088.5.) A determination whether new information is significant so as to warrant recirculation is reviewed only for support by substantial evidence. (Laurel Heights II, supra, 6 Cal.4th at 1335.)

"Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." (CEQA Guidelines, §15088.5(b); see also, *Laurel Heights II, supra*, 6 Cal.4th at 1129.)

1. New information

Petitioners argue that recirculation is required because the FEIR included a number of new changes. In support of this argument, Petitioners argue that the FEIR is too large because it is 912 pages. Petitioners point out that the CEQA Guidelines state a draft EIR should normally not exceed 150 pages. (CEQA Guidelines, § 15141.) That section states that proposals of unusual scope or complexity should normally be less than 300 pages and applies to *draft* EIRs. (*Ibid*.)

Respondent and Real Party point out that the size of the FEIR is in large part due to the comment letters and responses to those letters, which amount to 628 pages in the FEIR. They also point out that another 248 pages of the FEIR are new appendices requested by the Petitioners. Finally, they point out that there are 27 pages of actual changes to the DEIR. (LOS 104-130.)

Petitioners' reliance on suggested page limits for the DEIR does not convince this Court that the FEIR should be recirculated. In addition, many of the pages included in the FEIR are due to comment letters and responses, including many from the Petitioners.

2. Changes to mitigation measures

Petitioners argue that the FEIR significantly changed nearly twenty mitigation measures and thus recirculation is required. Petitioners string-cite the mitigation measures that were changed in the FEIR, but do not discuss most of these measures. Petitioners focus on mitigation measure AIR-1, which is designed to mitigate emissions during construction. (LOS 118-120.) Petitioners quote the changes in the FEIR, but do not explain how these changes to AIR-1 are significant.

Petitioners also point out that CULT-1A and CULT-1B are new mitigation measures. They do not explain, however, why adding these mitigation measures results in significant new information. CULT-1A is a new mitigation measure that requires cultural sensitivity training prior to construction. (LOS 127-128.) Petitioners do not explain how this mitigation measure constitutes significant new information. CULT-1B is not a new mitigation measure but a change in the name of the measure only. (LOS 128.)

The changes to AIR-1 do not appear to be significant and the Court finds that Petitioners have not met their burden of showing that changes to AIR-1, CULT-1A and CULT-1B or the other undiscussed mitigation measures constitute significant new information.

3. Changes to hydrology modeling

Petitioners argue that the inclusion of Appendix X in the FEIR constitutes significant new information. In the DEIR, Appendix S provided analysis of salinity levels. (LOS 5399-5406.) Several comments raised questions about the modeling in Appendix S and in response the FEIR included Appendix X. Appendix X includes a more detailed modeling of salinity and bromide levels. (LOS 769-1000.) The FEIR states that the modeling in Appendix X did "not change the conclusions of less than significant for salinity impacts on drinking water, agriculture, and fish and wildlife that were made in the Draft EIR." (LOS 134.)

Petitioners argue that Appendix X identified significant new information because it showed increases in salinity that were greater than Appendix S and up to 5.5% at one intake station (C19). Petitioners have not shown, however, that this previously undisclosed increase in salinity has a significant impact on water quality. The DEIR and the FEIR both concluded that the Project would have a less than significant impact on water quality. The FEIR specifically notes the salinity levels of 5.5%, but concludes it would not violate the threshold of significance, D-1641, and thus would have a less than significant impact on water quality. As discussed in more detail below, Petitioners have not shown that this analysis was not supported by substantial evidence.

The Court finds that here, as in *Laurel Heights II*, Appendix X is a new study that serves "to amplify, at the public's request, the information found in the draft EIR." (*Laurel Heights II, supra*, 6 Cal.4th at 1137.) Appendix X is not significant new information that requires recirculation of the FEIR.

B. Analysis of the Projects Impacts on the Environment

- 1. Agricultural Resources
 - a. D-1641 Standard

Petitioners argue that the EIR's decision to use State Water Resources Control Board's Water Rights Decision D-1641 (D-1641) as the threshold of significance for salinity levels was an error.

Appendix S to the DEIR explains the decision to use D-1641. Appendix S explains that under the CEQA Guidelines, Appendix G, the most important significance criteria are "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." (LOS 5402.) The Department "has recently analyzed the impacts of tidal wetland restoration projects on salinity (e.g., Prospect Island, Winter Island, Decker Island)" and used a threshold of significance as "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)." (LOS 5402-03.) Appendix S explains that D-1641 "is part of SWRCB's implementation of the 1995 Bay-Delta Water Quality Control Plan (Bay-Delta Plan) and is considered the relevant water quality standard to assess salinity impacts." (LOS 5403, fn.2.)

Petitioners argue that the FEIR failed to acknowledge that the SWRCB may issue temporary urgency change petitions, allowing standards to be waived or modified. (Water Code §1435.) Furthermore, Petitioners argue that the FEIR does not acknowledge that when a change petition is issued, the Project would be more likely to have a significant adverse impact on agriculture due to high salinity in irrigation water. Petitioners have not cited any evidence or otherwise sufficiently explained when temporary urgency change petitions may be issued.

Petitioners also argue that it is not clear how compliance with D-1641 will occur and that the FEIR did not analyze what will happen to salinity levels when the Department is required to release storage water in order to comply with D-1641. Petitioner points to letters from the Central Delta Water Agency for this issue. (LOS 5560, see also 250-251; LOS 6803, 6808.) As explained in the FEIR, the modeling (appendices S and X) did not indicate any instances of non-compliance with D-1641. (LOS 137.)

Petitioners have not provided substantial evidence that explains why the reliance on D-1641 is improper. Instead, the Court finds that the DEIR and FEIR sufficiently explain why D-1641 can be used as a threshold of significance. (LOS 137, 5402-5403, 1334.)

b. Cumulative impact of salt accumulation in soils

The EIR found that salinity levels in the delta would increase slightly due to the Project, but that the levels would not exceed the D-1641 standard and therefore would have a less than significant effect on the environment. Petitioners argue that the EIR failed to consider whether this increase in salinity would have an impact on salinity levels in soil over time.

The question here is whether the discussion of the Project's impact on soil was sufficient. Respondent's decision to use the D-1641 standard as a threshold of significance and its determination that the Project would not exceed the D-1641 standard are subject to review by this Court under the substantial evidence standard.

The DEIR explained that the D-1641 standard includes agricultural beneficial uses and that the salinity level modeling included two agricultural stations (D15 and D22). (LOS 1343.) The DEIR found that the Project would not exceed the applicable threshold of significance related to agriculture from increased salinity levels postconstruction operation and thus, the environmental impact on agriculture due to salinity levels in the Delta would be less than significant. (LOS 1343.)

The FEIR included one paragraph on the possibility of salinity building up in the soil that will damage crops. The FEIR stated that the modeling for the Project indicates no change in compliance with D-1641 electric conductivity standards. (Electric conductivity is a method used to measure salinity.) The FEIR concludes the section by explaining that "[i]n addition to the salinity of the diverted water, salinity build-up in soils is also a function of water management (e.g., timing of diversions during low tides) and soil characteristics of a particular site, which is not related to the Proposed Project." (LOS 141.)

Petitioners include a statement from an expert, Michelle Leinfelder-Miles, on salinity's effect on agriculture, which was provided in another case. (LOS 389-398.) The expert explained that "[i]rrigation water salinity influences soil salinity because irrigation water carries salts, and when it is applied to fields, salts are added to the soil. Salts accumulate in the soil at higher concentrations than they existed in the irrigation water because evaporation and plant uptake extract water from the soil leaving the salts behind." (LOS 393.) Different crops have different salinity threshold levels and there is information available on the reduction in crop yields based on various soil salinity levels. (LOS 393-394.) The expert also disagrees with the statement that "a change in water quality that is less than 5% is not an impact" and explains that "even a small change in water salinity could reduce yield if that change resulted in an increase in soil salinity that exceeded the crop tolerance threshold." (LOS 394.)

Petitioners' evidence shows that an increase in the salinity level in irrigation water can have a negative impact on crop yields due to the accumulation of salt in the soils. But whether higher salinity levels in the Delta will result in increased salinity levels in the soil is based on numerous factors. (LOS 393.) Petitioners' expert provides a general statement that even small changes in water salinity can reduce crop yield. Yet, the expert's statements are pulled from another case and do not address anything specific about this Project or the Project site. Furthermore, the expert does not address the D-1641 standard and thus, has not shown that D-1641 is an improper threshold of significance to determine impacts on agriculture.

The Court finds that Petitioners have not met their burden of showing that the EIR's analysis of the Project's impact on agriculture due to increased salinity levels was inadequate.

c. Williamson Act Contracts

The FEIR states that the Project does not violate the Williamson Act and notes that the covered properties each allow for use as open space. (LOS 329-330.) The FEIR notes that the three Williamson Act contracts here were entered into in 1970, 1979 and

1984 and each contract includes open space as a compatible use. (LOS330; see also, Respondent's RJN ex. A, B, C.)

Petitioners argue that the Project violates the Williamson Act because tidal habitat is not an approved use under the Williamson Act contracts. There are three properties in the Project Site with Williamson Act Contracts: Bowlsbey, Liberty Farms and Vogel. (LOS1166). The Solano County Williamson Act guidelines do not define open space to include tidal habitat. (Petitioners' ex. A p.12.)

For contracts that were signed prior to June 7, 1994, the compatible uses are those that are defined by this chapter at the time that Williamson Act contract. (Gov. Code, § 51238.3(c)(1).) Under the Williamson Act, "open-space" is a compatible use and "open-space" includes "habitat for wildlife". (Gov. Code, § 51201(e), (o).) At the time the three contracts were entered into, "open-space" included "essential habitat for wildlife." The parties do not discuss the removal of the word "essential". This Project is being used to fulfill tidal restoration requirements set by the U.S. Fish and Wildlife Service and appears to create essential habitat for wildlife.

The Court finds that the FEIR correctly concluded that the Project does not violate the Williamson Act.

- 2. Municipal Impacts
 - a. Salinity and Bromide

The DEIR provided a somewhat limited analysis of the salinity and bromide impacts on water quality. (LOS 1342, 5399-5406.) The FEIR, however, provided a more detailed analysis of those impacts, especially in Appendix X. (LOS 769-1000.)

Petitioners argue that under the modeling in Appendix X, the City of Vallejo's water intake station would exceed 5% salinity and that the EIR did not properly analyze this impact. High salinity levels can have a negative impact on drinking water quality by impacting water treatment operations. (LO5 1342.)

Appendix X shows salinity levels about 5% for Cache Slough (C19) intake for July, August and September 2009 and August 2010. (LOS 849, 856.) The salinity levels did not go above 5% for C19 in 2016. (LOS 863.) Appendix X noted that the "Largest percent EC increases due to Lookout Slough restoration occur... during the fall and summer at C19 (as much as 5.5% / 5.4%)." (LOS 773; see also 932.) The FEIR discusses the salinity increase at C19, "The Proposed Project is predicted to cause increased EC at compliance station CI9 of up to 5.5% for about six months per year; however, this increase would not cause non-compliance with D-1641". (LOS 138-139.) The FEIR also explains that Vallejo does not currently use C19 for water intake, but instead uses the Baker Slough
Pumping Plant. (LOS 138.) Appendix X predicts that the Project will decrease salinity levels at the Baker Slough Pumping Plant. (LOS 849, 856, 863.)

Petitioners also argue that the DEIR failed to provide sufficient modeling for bromide. Bromide is a concern for water quality because "[w]hen municipal water supplies are treated (particularly with ozone) to meet drinking water standards, Bromide can form Bromate, a known and regulated carcinogen, which can impact human health." (LOS 360.) Most of the North Bay Aqueduct water purveyors utilize ozone and would be highly sensitive to changes in bromide above baseline conditions. (LOS 360, 5653.)

Appendix X in the FEIR also provided a more detailed analysis of increases of bromide. The FEIR shows that the Project is predicted to change bromide levels by 2 to 4% for most areas and by 8% for C19. The FEIR again points out that C19 is not used for intake water and that bromide levels are expected to decrease at the Baker Slough Pumping Plant, which is used by Vallejo. (LOS 142.)

Petitioners argue that the increases in salinity and bromide are significant, however, they do not cite to evidence in the record to show that the anticipated levels of salinity or bromide would be a significant impact. Furthermore, assuming that salinity above 5% is problematic, Petitioners do not explain why the Project will have a significant impact on water quality if no one is currently taking water from site C19. The FEIR considered the increases in salinity and bromide and, based on substantial evidence, found them to be less than significant. That is all that CEQA requires here.

b. Organic Carbon

The DEIR did not discuss the Project's impact on organic carbons and their effect in drinking water. The FEIR addressed this point with a Master Response 8. (LOS 152-154.) Dissolved organic carbons (DOC) are part of the ecosystem in the Delta, but are a potential concern for drinking water because DOC can contribute to the formation of disinfection byproducts (DBPs), which are regulated constituents of drinking water. (LOS 152.)

Petitioners argue that the FEIR discussion on organic carbons was insufficient, pointing to the following sentence "The Draft EIR did not include an analysis of the Proposed Project effect on DOC because there is no regulatory standard to form a significant threshold to determine effects on DOC levels." (LOS 154.) Petitioners argue that CEQA requires the Department to prepare a good faith response to the comments regarding organic carbon or formulate a non-regulatory threshold of significance. (Petitioners' Brief p. 21.) Petitioners fail to address the remainder of that paragraph, which states that "because several comments were raised regarding DOC, DWR reconsidered the issue based on the above information." (LOS 154.)

Petitioners also failed to explain why Master Response 8 was an insufficient response to the comments on organic carbon. (LOS 152-154.) Master Response 8 explains that there is no regulatory threshold for dissolved organic carbons and the current scientific understanding is insufficient to make accurate predictions of the Project's impact on DOC. (LOS 153.) The FEIR discussed an accidental levee breach at Liberty Island that resulted in the creation of tidal wetlands from 1998 to 2010. During this time, DOC levels at the North Bay Aqueduct intake stayed the same or slightly decreased. (LOS 153.) The FEIR also noted that modelling found that the water at and near the Project Site would have residence times of a week or more. A study at Shag Slough found that longer residence times resulted in additional environmental processing of DOC which resulted in a lower potential to form DBPs. (LOS 153.) The Court finds that the analysis of the Project's impact on dissolved organic carbons is based on substantial evidence and complies with CEQA.

c. Water Diversions

Petitioners argue that the Project will have negative impacts on their water diversions. The Project may result in increases in non-native plant species like water hyacinth or water primrose. Water hyacinth has been increasing in the Delta from 2004 to 2014. (LOS 322.) Petitioners are also concerned the Project's plan for natural recruitment of other plants will take years or decades and may be unsuccessful due to the invasive plant species. (LOS 335; see also LOS 5638.) Petitioners argue that the non-native plants will increase the cost of Petitioners' maintenance at their diversion points.

Respondent and Real Party point out that the DEIR considered the impact of invasive plant species and included appropriate mitigation measures, including BIO-4. (LOS 1244; see also 159-160.) The FEIR made clear that the monitoring and removal of invasive plant species would occur after construction. (LOS 122.) The FEIR found that it is expected that the Project will reduce overall cover of invasive species. (LOS 159.)

As discussed below, BIO-4 is a proper mitigation measure. Thus, the FEIR has provided sufficient analysis for its conclusion that there would not be an increase in invasive species, which negates Petitioners' concerns about increased maintenance costs due to increased invasive species.

Petitioners also argue that the Project is designed to increase the numbers of listed and endangered fish species, which will adversely impact the ability of municipal and agricultural water users to divert water. Petitioners explained that "[i]f the Project is successful the number of endangered fish species will increase in the vicinity of the District's diversion intakes and drainage outlets. An increased population of endangered species in the project area would cause increased regulatory restrictions and costs for the District to comply with environmental requirements." (LOS 729.) This concern is echoed in the comment letters. One comment letter noted that "the DEIR does not analyze how the Project would make fish vulnerable to take via entrainment at longstanding water diversion facilities operated by other agencies, and whether this result in a need to relocate water facilities." (LOS 307.)

Appendix E of the DEIR notes that the Project is intended to provide suitable habitat for Delta Smelt and other special-status fish species and "this may result in a local increase in abundance within the Proposed Project Site and adjacent waterways." (LOS 2713.) The DEIR found this was not an adverse environmental effect. The DEIR also stated that the "Project does have the potential to indirectly affect nearby agricultural lands through the increase in the abundance of protected fish species that could be entrained by local water diversions including Delta smelt, green sturgeon, Chinook salmon, and other salmonids." (LOS 2713.)

The FEIR stated that an increase in the numbers of listed fish is not an adverse environmental impact that must be analyzed and mitigated. (LOS 146.) The FEIR goes on to discuss whether the water diversions will have a negative impact on the listed fish species. (LOS 146-147.) The FEIR notes that the California Department of Fish and Wildlife can require that screens be added to diversions to protect listed fish from entrainment, but does not require screens as a mitigation measure. (LOS 147.) The FEIR noted that "[s]ome of the comments raised the question of whether diverters might be required to move their diversions to protect listed fish species. As far as DWR is aware, this is an action that has not been proposed by any regulatory agency and is not considered an environmental effect of the Proposed Project that must be considered for mitigation." (LOS 147.)

Whether Petitioners will have to move their water diversion facilities or add screens to protect from fish entrainment are potential indirect physical impacts. Thus, the Court's analysis is whether Petitioners' concerns that they will have to move their water diversion facilities or add screens are reasonably foreseeable impacts caused by the Project or whether their concerns are speculative or unlikely to occur. (See, *City of Long Beach, supra,* 19 Cal.App.5th at 478-479.) The Project is likely to increase the populations of native fish, but the record does not show that adding screens or moving the facilities are reasonably foreseeable outcomes from the Project. Instead, these concerns are too speculative.

3. Biological Resources

a.Fish Predation Impact

Petitioners argue that the EIR improperly found that the Project's effect on nonnative fish would have a less than significant impact on special-status fish species.

The DEIR states that non-native fish are expected to occur in the new habitat created by the Project and would have the opportunity to prey on native fish. (LOS 1272.) The DEIR goes on to explain, however, that the new / restored habitat will

benefit juvenile salmonids and other native fish. The increase in wetland habitat and high food productivity provided by the Project is expected to benefit the growth rates and body size of fish. When native fish are faster or larger than predators, the potential for predation by piscivorous fish is reduced. (LOS 1273.) The DEIR cited to several studies and articles that were provided in the record. (LOS 16461 (The Floor Pulse Concept in River-Floodplain Systems); 16498 (Fish Swimming Stride by Stride); 16582 (Size-Dependent Predation in Piscivores); 17548 (Shallow-Water Piscivore-Prey Dynamics in California's Sacramento-San Joaquin Delta); 17568 (Patterns in the Use of a Restored California Floodplain by Native and Alien Fishes); the Court was unable to locate the article cited in footnote 37 at LOS 1273.)

The DEIR concludes that the Project is designed to provide beneficial effects to native fish while minimizing opportunities for non-native species establishment. Predatory birds using sheetpile perches are the most likely to cause an impact on special-status fish. The DEIR concludes that any impact will be less than significant because natural perches already exist in the area and there will be construction disturbances that are likely to flush birds away. (LOS 1273.)

Petitioners argue that the less than significant finding is not supported by the evidence. Petitioners point to a 2011 article by Natural Resource Scientists that discusses earlier studies about fish in the Delta. (LOS 285-290; 5580-5585.) The 2011 article raises concerns about non-native predatory fish and their effects on native fish in the Delta.

The conclusion that the Project will have a less than significant impact on native fish is supported by substantial evidence. Petitioners' citation to one article providing a contradictory conclusion is insufficient to change this conclusion.

b. Delta Smelt Impacts

Petitioners argue that the Project will have negative impact on delta smelt because it will allow growth of invasive water hyacinth. Petitioners also argue that the mitigation measures related to water hyacinth and sand for spawning are not sufficient to reduce the impact on delta smelt to less than significant.

The DEIR found that with mitigation measures, the Project would have a less than significant impact on special-status fish species, which includes delta smelt. (LOS 1268.)

Petitioners argue that water hyacinth is a major invasive species, having increased from 1.3 to 10.6% of the area of the Delta from 2004 to 2014. (LOS 322; see also 5624 [the information regarding water hyacinth in the Downy Brand letter comes

from an article not included in the record].) According to Petitioners, water hyacinth has a negative impact on water quality and the Project will create more habitat suitable for water hyacinth, which is an impact that should be considered.

The DEIR identified water hyacinth as an invasive plant species requiring long term management. (LOS 1127.) Mitigation Measure BIO-4 includes in part that the Department shall monitor for invasive aquatic plant species and those species shall be removed in accordance with BIO-4(1) and (2). Those subsections state that where necessary to control identified populations, they will be treated according to control methods and practices considered appropriate for those species. (LOS 108-109.)

The Department points out that it currently has a contract with the Department of Parks and Recreation Division of Boating and Waterway (DBW) to monitor and treat invasive vegetation at the Department's Fish Restoration Program restoring sites, including the Project Site. (LOS 159-160.)

Petitioners' argument that the DBW is underfunded and doing a poor job of controlling water hyacinth fails. Petitioners have not presented evidence in the record that DBW is underfunded. Nor has Petitioners shown that DBW is currently unable to control the water hyacinth. Petitioners note an increase in hyacinth from 2004 to 2014, but have not shown further increases since 2014.

In reply, Petitioners argue that the mitigation measure as it relates to water hyacinth was not included in the DEIR and the impacts of invasive aquatic plants on water quality and fish survival were not analyzed in the DEIR, thus the FEIR needs to be recirculated. The DEIR stated that water hyacinth would be removed during construction activities and that it would be removed or sprayed for long term management. (LOS 1111, 1127.) Mitigation Measure Bio-4 was included in the DEIR, but without specific reference to invasive aquatic plants. (LOS 1244-45.) The changes to BIO-4 in the FEIR were not significant. The Court finds that Mitigation Measure BIO-4 is not an improper deferred mitigation (see discussion below) and therefore, the conclusion that the invasive plants will have a less than significant impact with mitigation is supported by substantial evidence.

The DEIR discusses the type of habitat suitable to smelt and explains the Project will provide a direct connection to the Shag Slough, which is known to support all life stages of the delta smelt. (LOS 1113; see also 1220-21 [discussing smelt habitat]; see also 3269- 3286 (Appendix H).) The DEIR also states that "If feasible... tidal channels excavation within the Proposed Project Site would be lined with sand or other suitable substrates for Delta Smelt spawning." (LOS 1114.)

Petitioners focus on the "if feasible" discussion regarding the placement of sand within tidal channels to help create smelt spawning areas. Petitioners have not shown that mitigation measures, including the placement of sand, are required to reduce the

impact on delta smelt. The Project is designed to restore 3,164 acres to tidal marsh and will create new habitat for delta smelt. The DEIR (in Appendix H) considered the requirements for delta smelt and how the Project will benefit delta smelt. (LOS 3282-84.) Appendix H found that "[t]he habitat benefits of restoring the Project area for Delta smelt are anticipated to be numerous and dynamic." (LOS 3284.) Thus, the record shows that the Project will benefit delta smelt regardless of whether sand is placed in the channels.

4. Hazards and Flooding

CEQA Guidelines Appendix G requires consideration of whether the Project would "Substantially alter the existing drainage pattern of the site or area... in a manner which would... ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii)create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows." (CEQA Guidelines, Appendix G, Section X. Hydrology and Water Quality.) CEQA also requires consideration of whether the Project would "Result in inadequate emergency access." (CEQA Guidelines, Appendix G, Section XVII. Transportation.)

a. Impacts on Flood-Control Infrastructure

Petitioners argue that the Project will change wind-wave generation that could lead to erosion of nearby levees and the Project does not adopt mitigation measures to prevent this.

The DEIR noted that there was a concern that the Project would expose levees to wind-generated waves and lead to erosion of levees. (LOS 1346.) The Project design includes several items to protect from such wind-wave erosion. The Project includes a new Duck Slough Setback Levee, just east of Duck Slough. (LOS 1079, 1110.) This Setback Levee will be designed so there is no overtopping from wave run-up. (LOS 1347.) The Cache/Hass Slough east levees will undergo improvements and be turned into a training levee, which would break waves from the Project Site so they would not continue to propagate towards the Cache Slough and Hass Slough west levees. (LOS 1347, see also 1110.) In addition, the DEIR concludes that the Cross Levee (an east-west levee in the southern portion of the Project Site) would break all waves emanating from the Project Site. (LOS 1347.) The DEIR concludes that the Project would not result in adjacent properties being subject to increased wave run-up beyond the Cache/Hass Slough Training Levee and the Duck Slough Setback Levee and therefore, the Project's impact on wind-wave generated erosion would be less than significant. (LOS 1348.) Additional information on the levees and their designs is discussed in Appendix D to the DEIR. (LOS 1771.) Here, the DEIR raised a concern about potential erosion and then included ways to avoid such erosion as part of the Project's design. Petitioners have not shown that the DEIR was required to include specific mitigation measures to prevent wind-wave

erosion when the Project itself was designed to reduce such impacts to less than significant. Furthermore, Petitioners have not shown that the DEIR's conclusion that there would be a less than significant impact on wind-wave generated erosion was not based on substantial evidence.

Petitioners state the Project will result in degrading of the Yolo Bypass Levee. The evidence, however, does not support this statement. Prior to the completion of the DEIR, an email was sent stating that the Yolo Bypass Levee is not proposed to be maintained and will degrade overtime. The email explained that this has the potential to put significant pressure on the Cache/Hass Slough levee and that in a 100-year event will contribute to increased wave energy on the RD 2060 levee. The email went on to suggest several ideas, including making the Cache/Hass Slough Levee a training levee. (LOS 96877.) Petitioners have not shown that this email was not considered and addressed in the DEIR. Instead, it appears that the Project included the training levee suggestion made in this email.

Petitioners also argue that the Project will alter hydraulics in the Cache Slough region during high flow events, which would put pressure on other levees. Reclamation District 2068 states that the Project would alter hydraulics in the Cache Slough region at high flow events causing increased water levels and flooding pressure on State Plan of Flood Control levees that already have erosion, stability and freeboard deficiencies and that levees would be subject to increased wave fetch and erosion. (LOS 730.) The North Delta Water Agency also raised concerns about the Project causing more intensive wave-fetch forces leading to erosion of levees for seven reclamation districts in the vicinity. (LOS 242.) The FEIR explains that DEIR included Appendix D, which looked at these issues in detail. (LOS 242; see also 1771.) in particular, the FEIR points to a technical memorandum analyzing wave runup and wind setup for the Duck Slough Setback Levee, the Cache/Hass Training Levee, the Cross Levee and the Yolo Bypass East Levee. (LOS 2495.) The FEIR also points to a map showing the various Reclamation Districts near the area (LOS 1829) and then explains why the concerns about erosion of levees for the seven reclamation districts is unfounded. (LOS 243.)

The North Delta Water Agency also stated that the change in velocities may create erosion of nearby levees during high flow conditions. (LOS 246.) Yet, Appendix D considered velocity on nearby levees and found that existing rock slope protection was sufficient to mitigate erosion during a 100-year event. (LOS 1805.)

The DEIR states that the levee systems on the Project Site's perimeter along Cache and Hass Sloughs are considered deficient due to lack of adequate freeboard and deferred maintenance, and they are particularly vulnerable to increases in water level, erosion and wind-wave run-up potential. (LOS 1084.) The levees identified as being deficient are the Cache Slough Levee, the Hass Slough Levee and the Yolo Bypass West (Shag Slough). (LOS 1350.) The Shag Slough levee will be breached in nine places in order to create the Project. (LOS 1350.) The DEIR explained that the Project was designed to limit increases of flood stages in Cache and Hass Slough to no more than 0.01 foot. (LOS 1350.) In addition, the Duck Slough Setback Levee is designed to be built at a 100-year event plus six feet of freeboard and an extra one foot for climate resiliency. (LOS 1350.)

Petitioners argue that the EIR fails to adequately analyze impacts of the levee system, failed to include substantial evidence and failed to include mitigation measures. Petitioners' argument fails on all points.

b. Loss of Flooding Capacity and Impacts on Emergency Access

Petitioners argue that the EIR fails to consider the loss of 40,000 acre-feet flood capacity due to changes to Unit 109, citing to page II-39 in the DEIR. (LOS 309.) That cite, however, does not state that the Project will reduce flood capacity. (LOS 1073.) The FEIR responds to this comment by also noting it was unclear what was being referred to. (LOS 309.) The FEIR goes on to explain that the Unit 109 levee system is designed to protect 13,000 acres of land from flooding and was not designed as a flood storage system. FEIR also states that the Project will create approximately 40,000 acre-feet of flood storage. (LOS 309.) Petitioners have not shown that the EIR failed to consider a loss of flood capacity due to changes to the Unit 109 levee.

Petitioners argue that the EIR did not consider the negative effects on emergency access, including changes to the emergency response plans and limits on PG&E's ability to access its towers during an emergency. (LOS 342.) The DEIR stated that the Project would not alter publicly accessible roadways in a manner that might result in inadequate emergency access. Liberty Island Road presently dead ends on the western side of the Liberty Farms Property and does not serve any populated areas that require emergency access. The only property that would see a potential decrease in emergency access is the Liberty Island Ecological Reserve, which is only accessible by foot or boat, and the pedestrian access will be removed as part of the Project. (LOS 1151.) Later, the DEIR notes that the Reserve does not contain any residences or businesses that would require evacuation or response in the event of an emergency. (LOS 1319; see also 342-343.) The FEIR also explains that access roads will be created on top of the levees to allow access for non-public uses. (LOS 310, 341, 734.)

Petitioners argue that the FEIR's statement that the alteration to the RD 2098/2068 Emergency Operation plan will be considered "at the appropriate time" (LOS 344) is an improper deferred mitigation. Petitioners have not shown that there is a significant impact on emergency access such that a mitigation measure is required. At oral argument, Petitioners acknowledged this point but argued that a proper analysis of this issue may have shown a significant impact on the environment, which might have required mitigation.

Petitioners also argue that the Project will affect RD 2068's ability to reduce flooding in RD 2068 during a high-water event by making a cut in Liberty Island Road (along with a second relief cut) to allow water to flow into RD 2098. (LOS 309, 733.) The FEIR states that the Department "and its contractors will comply with all applicable regulatory requirements, including alteration to the RD2098/2068 Emergency Response plan at the appropriate time." (LOS 734.) The FEIR did not provide further details on the Project's impact of flood risks to RD 2068 and instead referenced Master Response 12, which generally states that certain matters are not matters related to environmental impact. (LOS 157-158.)

The Project will require RD 2068 to re-consider its emergency response plan. Petitioners have not shown, however, that it is reasonably foreseeable that their new emergency response plan will result in physical changes to the environment. The Project will eliminate Petitioners' ability to make a cut in Liberty Island Road, but the Project will also add 40,000 acre-feet of flood storage in the general area where RD 2068 would have cut Liberty Island Road to slow or eliminate flooding upstream. Thus, it is possible that the Project will have a positive effect on RD 2068's ability to handle high-water events. It is, of course, possible that the Project will have a negative effect. But the question here is whether there is evidence in the record that the reconsideration of RD 2068's emergency response plan will result in physical changes to the environment. The Court finds that the Petitioners' claims here are too speculative.

> c. Long-term maintenance of the Duck Slough Levee and Regional Flood Impacts

According to the DEIR, RD 2098 is responsible for maintaining the Duck Slough Levee and the Department is responsible for maintaining the rest of the Project Site. (LOS 1098, LOS 81477.) RD 2098 endorsed the Project in March 2019 based on the agreement that it would only be responsible for operations and maintenance of flood control facilities north of and including the Duck Slough Levee. (LOS 81476-81478.) Petitioners are concerned that the Project will reduce funding for RD 2098 such that RD 2098 will not be able to properly maintain the Duck Slough Levee. (LOS 201-202, 310, 730.) If that levee is not properly maintained it can create flood risks in nearby Reclamation Districts. (LOS 310.) RD 2060 and RD 2068 point out that RD 2098's funding comes from the landowners in that district and that the Project will reduce the acreage in the District "leaving little acreage and few landowners" to meet the operation and maintenance costs. (LOS 310.)

The FEIR stated that RD 2098 would be responsible for maintenance and operation of the Duck Slough Setback Levee and noted that there is an existing statutory framework for the responsibility of RDs, funding, and even creation of a state-managed maintenance area to ensure continued function. (LOS 151.) Beyond this statement, Respondents and Real Party argue that these concerns about long-term maintenance economic concerns and thus, not required to be included in the EIR.

"[S]ocial, economic and business competition concerns are not relevant to CEQA analysis unless it is demonstrated that those concerns will have a significant effect on the physical environment. [Citations.]" (*Maintain Our Desert Environment v. Town of Apple Valley* (2004) 124 Cal. App. 4th 430, 446; see also CEQA Guidelines § 15064(f)(6), §15131 and §15382.)

In Maintain Our Desert Environment the project was a large distribution center and the identified real party in interest was Pluto Development. Plaintiff (and the Attorney General) argued that the project description violated CEQA because it did not identify the planned user of the property as Wal-Mart. Plaintiff argued that had Wal-Mart been disclosed as the user of the project there might be additional public comments on the project. The Court rejected this argument because there was no showing of undisclosed environmental impacts. It explained that the plaintiff needed to show that the identity of the final user of the project "implicates potential physical environmental impacts" and that "in order to establish that the EIR was inadequate because it did not disclose Wal-Mart as the end user of the Project, [plaintiff] must rely on something more than speculation. [Citation.]" (Maintain Our Desert Environment, supra, 124 Cal.App.4th at 446.)

In Goleta Union School Dist. v. Regents of University of California (1995) 37 Cal.App.4th 1025, the local school district objected to the university's plan for longrange development, including increasing the amount of students at the university. The SEIR showed that there would be an increase of 192 students in the local school district. The school district argued that CEQA required consideration and mitigation of classroom overcrowding. The Appellate Court disagreed and found that classroom crowding, per se, does not constitute a significant effect on the environment under CEQA. The Court stated that a fivefold increase in student enrollment would likely necessitate the construction of additional classrooms, which could constitute a physical change that significantly affect the environment. (*Id.* at 1032.)

Petitioners have not provided evidence in the record that shows RD 2098 will not be able to afford maintenance of the Duck Slough Setback Levee beyond mere speculation. The Court finds that Petitioners' argument that RD 2098 may lack insufficient funding in the future to maintain the Duck Slough Setback Levee is too speculative and therefore, the funding issue is an economic one that does not require analysis in the EIR.

- 5. Hydrology and Water Quality
 - a. Algal Blooms

Petitioners argue that the EIR failed to consider how the Project will increase harmful algal blooms (HABs) and that the standard of review here is independent

judgment. The FEIR discussed HABs in detail and therefore, the Court finds that the review here is substantial evidence, not independent judgment. Petitioners argue that there are five primary environmental factors that trigger the emergence and subsequent growth of Microcystis in the water column of Delta waters:

(1) water temperatures above 19°C;

(2) low flows and channel velocities resulting in low turbulence and long residence time;

(3) water column irradiance and clarity;

(4) sufficient nutrients availability of nitrogen and phosphorus and

(5) salinity below 10 ppt.

(LOS 379; 5699; see also LOS 444-504 (exhibit 7 to letter).) Petitioners also point to a study that explains growth of cyanobacteria in the Delta can increase with nutrient loads, shallow water and increased water temperature. (LOS 624 (exhibit 9 to letter); see also 5948.) The study notes that climate change will increase the risk that HABs will become increasingly competitive and that increased temperatures will increase stratification and water column stability, which also benefit HABs. (LOS 633, 5957.)

Respondent and Real Party argues that the FEIR considered all of these factors and found the changes would be less than significant. The DEIR mentions HABs in one paragraph, explaining that "[t]he emergence of increased concentrations of harmful algae blooms is indicative of potential problems with water stagnation, nutrient loading, and temperature increase." (LOS 1324.) The paragraph also discussed sources of nutrients and stated that "cyanobacterium *Microcystis aeruginosa* has been an increasing component of summer harmful algal blooms in the Delta." (LOS 1324; see also LOS 17602 [article cited in footnote 8].) Petitioners read this paragraph as admitting that harmful algal blooms have been increasing, however, the paragraph does not state that HABs are increasing.

The FEIR added additional analysis related to HABs. The FEIR states that current farming practices use pesticides and fertilizers, but such practices would end prior to construction and would decrease inputs that might contribute to water quality issues over time as part of the cumulative scenario. (LOS 130.) In addition, the Project would introduce tidal influence to the Project Site, which will reduce water stagnation. (LOS 130.) The section concludes that the Project is expected to have a positive influence on water quality be eliminating agricultural inputs and by reducing stagnation that contribute to the proliferation of HABs. (LOS 130; see also 162-163.)

As to water temperature, the DEIR explains that there is likely to be some water temperature increase from solar radiation in the shallow flats, but the water will mix with the adjacent bodies of water. In addition, the presence of vegetation in the marsh is expected to have a cooling effect. The DEIR concluded that "[t]emperature decreases associated with marsh vegetation shading are therefore anticipated to roughly offset or decrease temperature increases associated with solar radiation due to shallow depth." (LOS 1348 and 1274.) The DEIR cited to two studies supporting these conclusions. (LOS 21387 (cited at 1348) and 27227 (cited at 1274).) The FEIR concludes that "the Proposed Project would have minimal effect on water temperature that may influence the presence of HABs." (LOS 162.)

Petitioners argue that the DEIR's water temperature analysis is faulty because it does not support the statement that vegetation will provide a temperature offset and the Project will wait for natural revegetation. The DEIR relied on several studies to support its conclusions on water temperature (LOS 1348) and Petitioners do not offer any expert evidence, studies or opinions that explain why the water temperature conclusions are incorrect or why the DEIR's analysis is incomplete.

The FEIR notes that hydrodynamic modeling found that much of the area within and adjacent to the Project Site was found to have water residence times of a week or more. (LOS 153.) The DEIR estimated residence times at 1 to 14 days. (LOS 1348.) Petitioners argue that longer residence times create a higher probability of HABs. One of the comment letters stated that the technical analysis for another project found that 3-5 days of water retention begins to create risk of HABs. (LOS 379.) The FEIR did not specifically address the difference between 1 to 14 days and a week or more of water residence times. That omission, however, does not mean that the FEIR did not analyze the impact of water residence times and HABs. The FEIR explained that the Project would reintroduce tidal influence to the Project Site, which will reduce water stagnation. (LOS 163.) It may be that water residence times will be one week or more and the risk of HABs will still exist at the Project Site, but the evidence in the EIR shows that the risk will be lower than it is now.

As to salinity, the FEIR relies on the discussion in the DEIR. The DEIR found that the salinity levels would be in compliance with D-1641 standards and the salinity changes would not cause an adverse effect on the Delta as a drinking water source. (LOS 1342.) The FEIR concludes that the Project "would not result in substantial adverse effects on the beneficial use of Delta waters as drinking water or exceed the applicable threshold of significance for agricultural operations or fish and wildlife populations postconstruction." (LOS 162.)

In reply, Petitioners point out that the discussion in the DEIR on the various relevant factors was not specific to HABs. While the DEIR did not analyze each of the five factors in their effects on HABs, the FEIR considered each factor.

Finally, Petitioners argue that the EIR failed to consider cumulative impact of HABs. The FEIR discussed HABs and found there to be a less than significant impact cumulative impact because the Project would not contribute to an increase in HABs.

The Court finds that the FEIR provided substantial evidence of its conclusion that the Project will have a less than significant impact on water quality due to the risk of HABs.

b. Localized Water Supply

Petitioners argue that the FEIR failed to consider whether the Project will result in the need to relocate nearby water facilities due to changes in water quality and the potential for water facilities to entrain fish. (LOS 307-308; 324; see also 5614.) Petitioners point out that one of the Project objectives is to "create, restore, and maintain ideal habitat conditions to encourage the proliferation of Delta Smelt and other sensitive fish species associated with unrestricted tidal freshwater ecosystems in the Delta." (LOS 1036.) The Project will not remove or otherwise relocate water infrastructure, including diversions. (LOS 308.)

The question here is whether the Project's impact on local water facilities is the type of indirect impact that must be considered under CEQA. "An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable." (CEQA Guidelines § 15064 (d)(3).)

The issue of water quality is discussed above.

As to the concern that water diversion facilities may need to move due to increased fish entrainment, Petitioners are concerned that "[a]s fish density increases, the risk of entrainment increases, and more individual fish may be subject to take water diversions than under existing conditions." (LOS 307.) Petitioners have not explained under what circumstances a water diversion facility may need to move due to fish entrainment. Nor have they explained what kind of increase in fish is expected from the Project. Respondent and Real Party argues that the Project's goal is to create more habitat and not necessary increase fish population, but such an argument ignores the mentions elsewhere that the Project will have a net benefit to special status fish, including Delta smelt (LOS 1403-04) and is designed for "recovery of Delta smelt" (LOS 1103).

Petitioners have not met their burden of showing that it is reasonably foreseeable that water diversion facilities will be moved, which would require additional environmental analysis.

c. Regional Water Supply

Petitioners point out that the Delta is an important regional water source and several agencies submitted a comment raising regional water issues. (LOS 232; see also 5672.) Petitioners argue that in order to comply with D-1641 standards, the Department

will have to take water from an alternate source in order to mitigate salinity levels. Petitioners are also concerned that the Project will require the release of storage water to comply with D-1641, which would affect the post-1914 appropriative water rights. (LOS 251.) Petitioners' argument here is based on their argument above that the Project will increase salinity levels to such an extent that water release will be required to comply with D-1641. The FEIR found that the Project would not exceed D-1641 standards and thus, there would be no need to release storage water to prevent exceeding D-1641 limits.

Petitioners also argue that the EIR failed to disclose the impacts of invasive aquatic vegetation on regional water supply. Invasive plants, such as water hyacinth, consume more water than native plants. (LOS 377.) The FIER found that with mitigation measure BIO-4 the Project will have a less than significant impact on water quality due to invasive aquatic vegetation. The Court finds that the FEIR has provided sufficient analysis for its conclusion that there would not be an increase in invasive species.

6. Recreation Impacts

Currently there is pedestrian access for fishing along the shoreline of the Liberty Island Ecological Reserve (LIER) by way of the Shag Slough Bridge. In addition, pedestrians can fish along the Shag Slough Levee. (LOS 155, 1110, 1377; 5686.) The Project will remove the Shag Slough Bridge and breach the levee along the Shag Slough in several places, which will eliminate pedestrian access to the Reserve and the Shag Slough Levee. (*Id*.)

The FEIR and DEIR acknowledge that the Project will eliminate this pedestrian access, but found the environmental impact to be below the threshold of significance and thus, a less than significant environmental impact. (LOS 155-156, 1377-1379.) The DEIR considered three thresholds of significance, including the two from CEQA Guidelines, Appendix G, plus an additional one specific to this Project:

- increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- (2) include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment; and
- (3) substantially decrease opportunities to fish from the shoreline within the Delta region.

(LOS 1377.)

Petitioners argue that the Department erred in finding that that third threshold of significance was not met. The Department of Fish and Game believed that the loss of public land-based access to the Liberty Island Ecological Reserve would be a significant impact and pointed out that there would be a loss of three miles of land that can be used for fishing. (LOS 5686.) The Department of Fish and Game states that public bank fishing is already very limited in the Cache Slough Complex as most levees are on private property or have restricted access and that the removal of the pedestrian access will disproportionally affect lower income individuals who cannot afford boats. (*Id.*)

The DEIR provided an explanation for the conclusion that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. The DEIR found 28 informal fishing areas and 30 fishing piers within a 60-minute drive of the Project Site. (LOS 1375-1376.) The DEIR includes a table of approximately 19 sites that offer about 500 linear feet of fishing per site, and two other sites offer 2,000 and 3,000 feet of fishing. (LOS 1375-76.) Using these numbers, the DEIR shows there are about 15,000 linear feet of fishing near the Project Site. (The actual amount is likely higher, as the DEIR mentions 58 fishing locations, but only provides size data on the locations in the table.) The Court notes that there are 5,280 feet in a mile and that 3 miles equals 15,840 feet.

It appears that the loss of 3 miles of shoreline fishing would be approximately equal to the amount of shoreline fishing remaining in the 60-minute driving area from the Project Site. Even if the amount of shoreline access is doubled, the Project would still result in a loss of about one third of the shoreline accessible by pedestrian for fishing. Based on the record available, it appears that the Project will have a significant impact on recreation based upon the third threshold of significance. However, the DEIR and FEIR concluded that the Project's impact on recreation would be less than significant.

The FEIR explains that the Project will also add 20 miles of new channels accessible by watercraft that will increase fishing opportunities. (LOS 155.) But the FEIR does not explain whether any of these new channels will have shoreline fishing access.

Respondents and Real Party argue that the Shag Slough Bridge is unsound and thus, should not be considered when evaluating the Project's impact on recreation. The Record does not support this argument. The Bridge is referred to as "structurally deficient" with a note that it "cannot support emergency vehicles." (LOS 1369, see also 1374.) Throughout the DEIR, there are statements that the Bridge provides pedestrian access to the Liberty Island. The DEIR notes that finishing is not allowed from the Bridge, but it is known to occur. Also, the Bridge provides pedestrian access to Liberty Island where fishing is permitted. (LOS 1374.)

Respondents and Real Party argue that the DEIR estimates only about 80 people use the area for fishing (LOS 1378), and given that small number, any loss of use would be less than significant. The number of fisherpersons is relevant to the first threshold of significance, but as to the third threshold of significance the concern is whether the Project will substantially decrease *opportunities* to fish from the shoreline within the Delta region. Thus, whether people are currently using the Project Site for fishing is not the inquiry. Instead, the inquiry is how will the Project effect opportunities to fish from the shoreline within the Delta.

Here, the available information shows that the Project will result in the loss of 3 miles of shoreline fishing. The information available in the DEIR shows that the loss of 3 miles of shoreline fishing would be a significant impact and the EIR's conclusion to the contrary was not supported by substantial evidence. Respondent failed to properly consider that Project's impact on opportunities to fish from the shoreline within the Delta region. Therefore, Respondents must re-consider this issue.

7. Energy Impacts and Appendix F

Petitioners argue that the DEIR and FEIR did not address the various requirements in CEQA Guideline, Appendix F. The DEIR states "Energy use associated with the Proposed Project is limited to construction-related energy such as fuel used to power equipment and to move workers to and from the site, as well as maintaining electrical power to existing pumps to dewater the site during construction." After construction, energy uses would be limited to powering an existing pump in Duck Slough, and fuel use for vehicles supporting maintenance and monitoring activities during the post-construction management and monitoring period. (LOS 1133.) Exhibit B to the DEIR listed the energy uses during construction. (LOS 1585-1586.) The DEIR included a mitigation measure for reduction in emissions during construction. (LOS 1185.) The DEIR states that materials excavated during construction will be re-used as appropriate to create tidal habitat. (LOS 1114.) (Petitioners failed to address several of the cites to the record provided by Respondent and Real Party.)

Petitioners have not met their burden of showing that the FEIR did not consider the energy impacts of the Project as required under CEQA.

C. FEIR Response to Public Comments

Petitioners argue that the FEIR failed to respond to public comments as required by CEQA. CEQA Guidelines require that the lead agency provide written responses to public comments submitted in response to the DEIR. "Responses to comments need not be exhaustive; they need only demonstrate a 'good faith, reasoned analysis.' [Citations.] ' "[T]he determination of the sufficiency of the agency's responses to comments on the draft EIR turns upon the detail required in the responses. [Citation.] Where a general comment is made, a general response is sufficient." ' [Citations.] ' "[A]n EIR is presumed adequate [citation], and the [petitioner] in a CEQA action has the burden of proving otherwise." ' [Citations.]" (*Gilroy Citizens for Responsible Planning v. City of Gilroy* (2006) 140 Cal.App.4th 911, 937; see also, CEQA Guidelines, § 15088(c).) Petitioners argue that there are several issues raised in the public comments that the FEIR failed to adequately address. Petitioners' citations to the record, however, are almost entirely citations to the public comments. In addition, Petitioners provided only a few citations to the FEIR where the issues were addressed. Petitioners were obligated to provide citations to all relevant evidence in the record. (*No Slo Transit v. City of Long Beach* (1987) 197 Cal.App.3d 241, 251 ["It is incumbent upon appellants to state fully, with transcript references, the evidence which is claimed to be insufficient to support the finding."].) While Petitioners of course cannot provide a page-specific citation to responses that never were provided, in some instances they have asserted that there were no responses, while the Court's review of the record shows that there were. In addition, when showing that no response was provided to a comment, it is helpful to cite to the comment in the FEIR as that often helps the Court to easily determine whether a response was provided.

The Court's ruling on this section is limited to issues where Petitioners provided citations in the record to the issue.

Petitioners argue that the FEIR did not provide an adequate response to a comment on organic carbons. For this argument, Petitioners do not cite to a specific public comment. Instead, they cite only to the Master Response 8 on organic carbon in the FEIR. (LSO 152-153) Without a cite to a specific public comment, the Court cannot tell which comment Petitioners argue was not the subject of an adequate response. In addition, Petitioners do not explain how Master Response 8 was inadequate.

Petitioners argue that the FEIR did not provide an adequate response to a comment on the lack of ability of RD 2098 to fund ongoing maintenance and again only cite to the Master Response on the issue without including any public comment. (LOS 151-152.)

Petitioners argue that FEIR did not respond to comments that the Project would impact its ability to divert water from the Cache Slough Pumping Plant and similar concerns raised by the Solano County Water Agency. (LOS 5587, 5628, 5654; the corresponding FEIR cites are LOS 707, 729, 363.) Petitioners point to several comments that explain the Project's intended result is to increase the number of listed and endangered fish species, which would adversely impact the ability of municipal water users to divert water. (LOS 5614-15; 5628, 5639, 5654, 5669; the corresponding FEIR cites are LOS 307, 729, 335-336, 363, 244.) Petitioners state that the FEIR addressed concerns about salinity in the water and how it relates to municipal water impacts (LOS 140-141), but failed to address the concern that more fish will threaten the operation of municipal intakes. Petitioners did not address or even cite to Master Response 3 in their opening brief, which addresses local water diversions and fish species. (LOS 146-147.)

As discussed above, the Court finds that Master Response 3 sufficiently responded to Petitioners' concerns regarding fish entrainment and how that might

impact water diversion facilities and thus, the Court finds that Master Response 3 provides a good faith, reasoned analysis of Petitioners' concerns on this issue. On the remaining comments, Petitioners have not met their burden of showing that the FEIR did not adequately respond to public comments.

D. Mitigation Measures

1. Farmland Impact / Conservation Easements

The Project would result in the loss of 1,460 acres of prime farmland by converting that land to tidal marsh. (LOS 1166.) The EIR concluded that this loss would be potentially significant unless mitigated. (LOS 1166.) The DEIR includes two mitigation measures: AG-1a and AG-1b. Measure AG-1a provides funding to improve nearby farmland, including improvements on 660 acres of prime farmland and improvements on 1060 acres of non-prime farmland. (LOS 1166-67; see also LOS 145-146.) Measure AG-1b requires the purchase of 1,000 acres of land for an agricultural conservation easement. The easement would require that this land be irrigated farm or pasture. (LOS 1167-1169.) The property chosen for the easement will be located in Solano County that is Prime Farmland according to the USDA Soil Survey, the land will have adequate water supply and the land will not have previously been encumbered by an agricultural conservation measures, the DEIR concludes that the Project will have a less than significant impact.

Petitioners argue that the use of conservation easements as mitigation was improper because that mitigation measure prevents the loss of agricultural land due to development, but does not create new agricultural land to offset the loss of the farmland at the Project Site.

In Citizens for Open Government v. City of Lodi (2012) 205 Cal.App.4th 296, the EIR found the loss of farmland could not be mitigated with a conservation easement to a less than significant impact. The city made a statement of overriding consideration as to the significant impact on farmland because there was no feasible mitigation for the loss of farmland. The EIR included a partial mitigation with a conservation easement at 1 to 1 ratio. The Court of Appeal found that the EIR had correctly concluded that there was no feasible mitigation measure to replace the loss of farmland. (*Id.* at 322-324.)

A year later, however, *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 238, stated that agricultural conservation easements "may appropriately mitigate the direct loss of farmland when a project converts agricultural land to a nonagricultural use, even though an ACE does not replace the onsite resources." (*Id.* at 238.) In King & Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814, the Court of Appeal found that the use of an agricultural conservation easement to mitigate the loss of farmland was not a proper mitigation. The Court explained that "[e]ntering into a binding agricultural conservation easement does not create new agricultural land to replace the agricultural land being converted to other uses. Instead, an agricultural conservation easement merely prevents the future conversion of the agricultural land subject to the easement. Because the easement does not offset the loss of agricultural land (in whole or in part), the easement does not reduce a project's impact on agricultural land would remain significant after the implementation of the agricultural conservation easement." (*Id.* at 875.)

In Save the Hill Group v. City of Livermore (2022) 76 Cal.App.5th 1092, the project acknowledged a loss of 32 acres of habit for special status species. The EIR included compensatory mitigation at a 2.5:1 to 3:1 ratio for this permanent habitat loss for each of these species and required the land to be in a conservation easement. (Id. at 1116.) Relying on King and Gardiner, petitioner argued that the conservation easement would not result in the provision of any new resources to offset or compensate for the habitat permanently lost to the project and thus, would not mitigate the loss of habitat. The Court of Appeal rejected this argument. It distinguished *King and Gardiner* as involving the loss of 7,450 acres as opposed to 32 acres. But the Court of Appeal also explained that such conservation easement mitigations were allowed. "More importantly, CEQA does not require mitigation measures that completely eliminate the environmental impacts of a project. Rather, CEQA permits mitigation measures that would substantially lessen the significant environmental effects of the project. (§ 21002.) The Guidelines, in turn, provide that mitigation may include '[c]ompensating for the impact by replacing or providing substitute resources or environments ..., ' (Guidelines, § 15370, subd. (e), italics added.)" (Id. at 1117.) The full text of section 15370(e) states that mitigation includes "[c]ompensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."

Save Panoche Valley v. San Benito County (2013) 217 Cal.App.4th 503 involved a solar project that would use 4,885 acres and the solar items would be removed when the project lost its usefulness (after 30 years). The court rejected the argument that the project was required to create additional agricultural lands to compensate for the ones utilized for the project site are unsubstantiated. (*Id.* at 529.) "The goal of mitigation measures is not to net out the impact of a proposed project but to reduce the impact to insignificant levels." (*Ibid.*) The mitigation measures there, however, involved conservation easements, but also that the developer would be required to dismantle the project upon conclusion of its useful life, which would include disassembly of any structures and restoration of the lands.

Respondent and Real Party argue that they were not required to identify a specific property for the conservation easements. In Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260 the EIR included a mitigation measure that required the acquisition of property near the project site as habitat for the Quino butterfly that would be impacted by the Project. (Id. at 274.) The court noted that "[g]enerally, an agency does not need to identify the exact location of offsite mitigation property for an EIR to comply with CEQA. [Citation.]" (Id. at 279.) In Preserve Wild Santee a specific property was not identified, but the EIR included criteria on how the property would be selected including that 100 acres would be adjacent to the project site and the remaining acres would either support the Quino or be proven to have a high potential to support the Quino. (Id. at 274.) In Save the Hill Group the developer identified a specific property for the conservation easement, which the court of appeal stated was suitable for mitigation. (Save the Hill Group, supra, 76 Cal.App.5th at 1116.) Relying on Preserve Wild Santee the court went on to state that if the chosen site proves inadequate for mitigation, the city could compel the developer to find and protect an alternative site. (*Ibid.*) Save the Hill Group did not address whether the RFIER included any criteria on how an alternative site would be chosen.

The Court finds that agricultural conservation easements can be a proper mitigation measure. In order for an agricultural conservation easement to be a proper mitigation measure, however, there must be evidence in the record as to the planned easement area or criteria that will be used to select the easement location. Here, the record shows that the property selected for the easement will be prime farmland in Solano County with sufficient water for irrigation. In addition, referring the "property" in the singular suggests that the easement will occur on one continuous piece of land as opposed to multiple smaller easements. The Court finds that these criteria are sufficient to show that an agricultural conservation easement in this case is an appropriate mitigation measure.

In addition to the agricultural conservation easement mitigation measure, the DEIR included another mitigation measure that would provide improvements to 1,060 acres of non-prime farmland as well as improvements to prime farm land. The DEIR found that these improvements would "increase the agricultural value and productivity of approximately 1,700 acres". (LOS 1167.) When considering these mitigation measures together, there is substantial evidence to support the finding that these mitigation measures reduce the environmental impact to less than significant.

2. Biological Resources

The DEIR states that the Project could facilitate the introduction and establishment of invasive species. (LOS 1244.) The DEIR found that with Mitigation Measure BIO-4, the Project's impact on invasive species would be less than significant. (LOS 1244.) Petitioners argue that Mitigation Measure BIO-4 is insufficient because it does not disclose and evaluate how the Department will manage invasive species during the operational phase of the project or the criteria for their removal. (LOS 1244.) In reply, Petitioners argue that the mitigation measure is improperly deferred.

BIO-4 requires that protocols be established prior to construction. The protocols include: (1) identifying weeds that are rated high or moderate for negative ecological impact in the California Invasive Plant Database that have a potential to spread off-site and/or sustain on-site; (2) where determined necessary to control populations, weed infestations shall be treated according to control methods and practices considered appropriate for those species; (3) weed control treatments include all legally permitted herbicide, manual, and mechanical methods and will be in compliance with state and Federal law; and (4) the timing of weed control treatment shall be determined for each target plant species with the goal of controlling populations and the Department will apply these rules for invasive aquatic plant species. (LOS 108-109; see also, 1056, 1244-43.) The FEIR notes that the Department currently has a contract with the Department of Parks and Recreation Division of Boating and Waterway to monitor and treat invasive vegetation. (LOS 159-160.) Respondent and Real Party point out that there is a list of the parties responsible for monitoring and adaptive management tasks. (LOS 75868-75869.)

Respondent and Real Party also argue that BIO-4 should be considered in conjunction with BIO-2, which is designed to create more native plant growth and discourage invasive species growth with a 1: 1 replacement goal. (LOS 1241-42.) BIO-2 may have an effect on invasive plant species, but it does not provide specific criteria to determine when action will be taken on invasive plant species.

"Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan. [Citation.] On the other hand, an agency goes too far when it simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report. [Citation.]" (*Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275; see also CEQA Guidelines, § 15126.4, subd. (a)(1)(B).)

BIO-4 provides sufficient information on how invasive species will be identified and what types of controls will be used. The Court finds that BIO-4 is not an improper deferred mitigation.

3. Hydrology and Water Quality

The DEIR found that it would be possible for soil or contaminants to enter surface or groundwater during construction, but found that the impact would be less than significant with mitigation. (LOS 1340.) The EIR includes two mitigation measures, HYDRO 1 and HYDRO 2. (LOS 129, 1347.) Petitioners argue that these mitigation measures are insufficient because the mitigation measures only apply during construction and fail to address the adverse impacts on water quality due to invasive aquatic species, salinity and bromide and organic carbon. Petitioners' argument here is a repeat of their argument above that the EIR failed to properly analyze the Project's impact on water quality.

The EIR found that invasive aquatic species, salinity and bromide and organic carbon would have a less than significant impact on water quality. Thus, no mitigation measures were required as to these items. The Court finds that the EIR's mitigation measures on hydrology and water quality are sufficient.

E. Cumulative Impacts

The Project is designed to help meet the Department's obligation to restore 8,000 acres of tidal marsh and is part of an effort to restore or enhance 30,000 acres of habitat in the Delta and Suisun March. (LOS 1098.) The DEIR lists several other projects involving habitat restoration in the nearby areas. (LOS 1398-1400.)

Petitioners raise several arguments regarding the salinity levels, including a concern that salinity will exceed 5% in some places and the concern regarding soil salinity levels. (LOS 351; 394.) The FEIR explains that the salinity modeling in Appendix X considered the cumulative impact of the Proposed Project in addition to 17 other regional restoration sites in the Delta and Suisun Marsh. (LOS 143.) The modeling considered all regional projects with and without the Project and evaluated both scenarios for compliance with D-1641. (LOS 143.) The Court finds that the FEIR sufficiently considered the cumulative impact of other projects.

Petitioners argue that in 2015 the Department found that tidal habitat restoration had an adverse impact on water quality due to increases in bromide. (LOS 362; see also 5654.) The FEIR responded that the current version and configuration of this Project was not known in 2015 and that a more accurate and detailed analysis has been provided for this Project. (LOS 362.) Petitioners have not explained why the FEIR's explanation is insufficient.

Petitioners briefly argue that the planned incremental increase of endangered species in the region was not provided. Petitioners provide no citations to the record and insufficient explanation on what was needed on this issue. They also point to the DEIR's discussion on the cumulative impact on the loss agricultural. (LOS 1401.) The cumulative impact analysis found that while there will be a significant cumulative impact on the loss of farmland, the Project would have a less than significant impact with mitigation and the Project's contribution would be less than cumulatively considerable. (LOS 1401.)

F. Judicial Notice

Respondent and Real Party's request for judicial notice of Exhibits A, B and C is granted.

IV. Conclusion

The Court grants the petition for writ of mandate. The Court finds that Respondent violated CEQA because the FEIR's analysis that the Project will have a less than significant impact on opportunities to fish from the shoreline is not supported by substantial evidence. Petitioners' other contentions are rejected.

A writ of mandate shall issue compelling Respondent to set aside the certification of the FEIR. Any further consideration of the project must comply with this order. Counsel for Petitioners are directed to prepare a writ of mandate consistent with this order.

DATED: November 17, 2022

Hon. Edward G. Weil Judge of the Superior Court

Superior Court of California, Contra Costa County

CV - Martinez-Wakefield Taylor Courthouse 725 Court 5treet Martinez CA 94553 925-608-1000 www.cc-courts.org



K. Bieker Court Executive Officer

CLERK'S CERTIFICATE OF MAILING				
CASE NAME: CITY OF VALLEJO VS CA DEPT OF WATER RESOURCES	CASE NUMBER: MSN21-0558			
THIS NOTICE/DOCUMENT HAS BEEN SENT TO THE FOLLOWING ATTORNEYS/PARTIES				
JEANNE M ZOLEZZI 5757 PACIFIC AVE., STE. 222 STOCKTON, CA 95207				
MATTHEW G BULLOCK 455 GOLDEN GATE AVE., STE. 11000				
SAN FRANCISCO, CA 94102				
G BRAIDEN CHADWICK 3001 LAVA RIDGE CT., STE. 120 ROSEVILLE, CA 95661				
OSHA R MESERVE 510- 8TH ST. SACRAMENTO, CA 95814				
COREY M MOFFAT 455 GOLDEN GATE AVE., STE. 11000 SAN FRANCISCO, CA 94102				

Superior Court of California, Contra Costa County

CV - Martinez-Wakefield Taylor Courthouse 725 Court Street Martinez CA 94553 925-608-1000 www.cc-courts.org



K. Bieker Court Executive Officer

KATHRYN L OEHLSCHLAGER 455 MARKET ST., STE. 1500 SAN FRANCISCO, CA 94105

RANDY J RISNER 555 SANTA CLARA ST., 3RD FLOOR VALLEJO, CA 94590

SUPERIOR COURT OF CALIFORNIA, CONTRA COSTA COUNTY

I DECLARE UNDER PENALTY OF PERJURY THAT I AM NOT A PARTY TO THE WITHIN ACTION ØR PROCEEDING; THAT ON THE DATE BELOW INDICATED, I SERVED A COPY OF THE STATEMENT OF DECISION BY DEPOSITING SAID COPY ENCLOSED IN A SEALED ENVELOPE WITH POSTAGE THEREON FULLY PREPAID IN THE UNITED STATES MAIL AT MARTINEZ, CA AS INDICATED ABOVE TO ALL ACTIVE AND DISPOSITIONED PARTIES.

DATE: 11/18/2022

B-2 Letter 2: Central Delta Water Agency, Exhibit 2

ATTACHMENT 4 – PUBLIC ACCESS SUMMARY

LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT

Solano County, California

Prepared on Behalf Of:

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

Prepared For:

EIP III Credit Co., LLC 2330 Marinship Way, Suite 120 Sausalito, CA 94965

Contact: Stephanie Freed stephanie@ecosystempartners.com

Prepared By:

WRA, Inc. 2169-G East Francisco Blvd. San Rafael, CA 94901

Contact: John Baas Baas@wra-ca.com

Date: December 2021







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1. INTRODUCTION

As presented in the July 16, 2021 Determination Regarding Appeals of the Certification of Consistency by the California Department of Water Resources for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Determination) by the California Department of Water Resources (DWR) for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project), Delta Plan Policy DP P2 states that: "(a) Water management facilities, ecosystem restoration, and flood management infrastructure must be sited to avoid or reduce conflicts with existing uses or those uses described or depicted in city and county general plans for their jurisdictions or spheres of influence when feasible, considering comments from local agencies and the Delta Protection Commission (DPC)."

The Delta Stewardship Council (DSC) found that the *Certification of Consistency for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Certification) was not supported by substantial evidence in the record as it relates to DP P2. The specific matters being remanded to DWR for reconsideration under DP P2 include:

- 1. Recreational uses of Liberty Island Road, the Shag Slough Bridge, and the Liberty Island Ecological Reserve (LIER) do not constitute existing uses.
- 2. The Covered Action would not conflict with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER.
- 3. The Department avoided or reduced conflicts with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER when siting the Lookout Slough Project.

This document (Attachment 4 to the Re-Certification) is part of a package created by DWR to resubmit a Certification of Consistency for the Project (Re-Certification). DWR prepared additional information in response to the Determination related to items 1 and 2, which is presented in Attachment 3 to the Re-Certification. Related to item 3, Attachment 3 also discusses Project siting and potential conflicts with existing recreation uses. This document addresses how the Project will minimize conflicts with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER by altering existing recreational uses and by providing additional recreational benefits.

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2. PUBLIC ACCESS SUMMARY

Currently, the only legal access to waters in or around the Project site occurs seasonally via Liberty Island Road, across a structurally deficient bridge, to levees that are unmaintained and subject to flooding. All other access to waters from Liberty Island Road is across private lands that are maintained by Reclamation District (RD) 2098 (see Figure 1). The Project will create recreational benefits by converting 3,400 acres of privately owned land to public lands, which will allow access to open water within the Project site (see Figure 2).

The Project will minimize conflicts with existing recreational uses by creating new recreational facilities and opportunities, altering existing public uses such as shoreline fishing, and maintaining access to the LIER by boat. This document describes what will be included as part of the Project to create recreational benefits and reduce conflicts with existing recreational uses. This document was developed based on information previously considered as well as additional information on existing recreational uses and input on what can be done to benefit recreational use of the LIER. Information on existing proposals from stakeholder engagement, and evaluations on the feasibility of incorporating proposals from stakeholders is discussed in Attachments 2 and 3. Recreational benefits of the Project are presented below.

2.1 Improved Public Accessibility

2.1.1 New Navigable Tidal Channels

The Project will create over 20 miles of new navigable public tidal channels that will be accessible to watercraft users (boaters, kayakers, etc.) for fishing, hunting, wildlife viewing, and other forms of aquatic recreation. The Project includes nine locations where the Shag Slough Levee will be breached and two locations where the Vogel berm will be breached to create new connections for these tidal channels. The width of the breaches to Shag Slough (i.e., the channel mouths) will range from approximately 190 to 610 feet (see Figure 2). In addition, breaches in the berms of Vogel Island will range from approximately 45 feet to 154 feet across (see Figure 2). Unlike the currently flooded portions of the LIER, the proposed network of new tidal channels will be large enough to provide opportunities for exploring the Project site's waterways and wetlands by watercraft. Tidal channels were designed to have water depths of approximately 2.1 to 6.5 feet, depending on the daily tidal cycle, and range up to 2 miles in individual channel length. Tidal channels will be managed to maintain free flow of tidal and flood waters, which

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may include the removal of obstructive debris, woody vegetation,¹ and non-native vegetation that could limit accessibility by watercraft, unlike the conditions observed at the LIER, where open waters contain snags, submerged debris, floating objects, old piers and pylons, and remnant submerged structures (see the discussion below under *Operation and Maintenance* for further details).

These breaches to the interior of the Project site will accommodate opportunities for a variety of boater skill levels to access nature. Novice paddlers will be able to use the channel nearest the new boat ramp (discussed below) to gain access to both Shag Slough and the interior marsh. Boaters will be able to launch watercrafts from the boat ramp and paddle through the newly created breaches into Shag Slough to more easily access the channel known locally as the "Stair Step," and farther down into the LIER. The boat ramp is approximately half the distance to the "Stair Step" than the Shag Slough Bridge, allowing for closer water access. These expanded and improved options for water access will provide a variety of recreational experiences for users. The nature of the landscape adjacent to these new channels will mature into habitats similar to those areas in the LIER that paddlers frequent – an open water area interspersed with a variety of marsh habitats.

2.1.2 Boat Ramp

Currently, there are no formally designated recreational facilities associated within the LIER,² and all boat launching occurs off of the unimproved levee shoreline. On the eastern side of Shag Slough, unmaintained remnant levees exist. On the western side of Shag Slough, the partially armored levee bank is utilized for informal boat launching. Limited surveys conducted in September 2021 observed that boaters primarily launch from the western bank of Shag Slough Levee, with fewer boaters crossing the Shag Slough Bridge to launch from the LIER (Attachment 2, Section 4.3.1). To improve public access for watercraft recreation, a new boat ramp will be constructed in the northeastern portion of the Project site on the north side of the northern-most breach of the Shag Slough Levee, located south of the proposed terminus of Liberty Island Road (see Figure 3).

The boat ramp will accommodate hand launching of watercraft to provide public access to the northernmost tidal channel and Shag Slough from the Shag Slough Levee. This boat ramp will also provide DWR, the California Department of Fish and Wildlife (CDFW), and public safety agencies (fire and sheriff) with a new location for motorized boat access to patrol waterways in and near the Project site, except during flood events. North of the boat ramp, a vehicle turnaround will be constructed at the terminus of Liberty Island Road, as described in the section below. A locked gate will be installed at the interface of the turnaround and the roadway leading to the boat ramp to prevent unauthorized vehicles from entry. The public will be able to walk around the gate

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Look out Slough Tidal H abitat Restoration and Flood Improvement Project Public Access Summary

¹ Woody vegetation management within the restoration area is discussed in Section 5.a.vi and Section 5.a. vii of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Long-Term Management Plan and Wetland Reserve Plan of Operations. WRA, Inc. 2021 Draft Long-Term Management Plan and Wetland Reserve Plan of Operations for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co., LLC and Prepared on Behalf of Department of Water Resources.

² CDFW. Liberty Island Ecological Reserve website: https://wildlife.ca.gov/Lands/Places-to-Visit/Liberty-Island-ER.

to the boat ramp to hand launch their watercraft. For safety reasons, vehicular access past the gate onto the levee will not be allowed. The distance from the turnaround to the water's edge is approximately 0.1 mile or 528 feet (see Figure 3), which is a shorter distance than currently experienced by some visitors who park their vehicles near the Shag Slough Bridge (Attachment 2C) and then cross the Shag Slough Bridge to hand launch boats from the LIER, which is a distance of approximately 0.13 mile or 700 feet.³ DWR will maintain the new boat ramp as part of the overall maintenance of the Project site (see the *Operations and Maintenance* discussion below).

2.1.3 Liberty Island Road and Turnaround Areas

Currently, visitors who recreate on Shag Slough Levee, Shag Slough Bridge, and at the LIER park their vehicles on the shoulder of Liberty Island Road, which has no designated parking areas. During stakeholder outreach, Solano County indicated that parking is permissible along the shoulders of County roadways as long as there is no posted signage indicating otherwise (stating "no parking allowed"). The County has posted four signs⁴ that read "No Parking Anytime" along Liberty Island Road by the Shag Slough Bridge and one sign posted "No Parking on Bridge" on the east side of Shag Slough, on the LIER (Figure 1). In addition, Solano County Ordinance No. 521, passed in 1962, makes it unlawful for any vehicle to park at any time, "on the west side of Liberty Island Road from the Liberty Island Bridge to a point 1.5 miles north thereof" (Attachment 4A).

As part of the Project, Liberty Island Road will be improved for the segment at the northern boundary of the Project site. The Project will repave this section of Liberty Island Road and create two new paved tumaround areas off of Liberty Island Road to accommodate a safe turning radius for both large trucks such as local agricultural vehicles and vehicles towing trailers. The first turnaround area will extend from Liberty Island Road in the northwest corner of the Project site, adjacent to the new Duck Slough Setback Levee (Figure 4). The second turnaround area will extend from Liberty Island Road in the northeast corner of the Project site at the road terminus by Shag Slough Levee (Figure 3). Existing informal uses within the road right-of-way will continue on the portion of Liberty Island Road or the new turnarounds areas will be required to comply with County rules consistent with existing uses. As noted above, the turnaround located by Shag Slough Levee is located approximately 0.1 mile (or 528 feet) north of the new boat ramp.

2.1.4 Pedestrian Access and Bank Fishing

Limited surveys in September 2021 found that most (86 percent) visitors surveyed who were fishing used the western bank of Shag Slough Levee to fish (Attachment 2, Section 4.3.1). These visitors trespass on private land associated with the western bank of Shag Slough Levee to fish in Shag Slough. The remaining 14 percent of anglers surveyed crossed the Shag Slough Bridge to access the limited areas of bank fishing along approximately 1.6 miles of the LIER (see

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Look out Slough Tidal H abitat Restoration and Flood Improvement Project Public Access Summary

³ Approximate distance assessed using Google Earth Pro. Accessed December 6, 2021.

⁴ Williams G, Western Region Projects Director, Ecosystem Investment Partners, personal communication, February 3, 2021.

Attachment 2A for additional information). During an additional sampling period on October 23 and 30, 2021, a similar pattern was observed, with 78 percent of anglers observed using the western bank of Shag Slough Levee (Attachment 2, Section 4.3.1).

DWR acknowledges that the Project design will eliminate pedestrian access to portions of the Shag Slough Levee and to Shag Slough Bridge and, therefore, will eliminate pedestrians' abilities to fish on the banks of Shag Slough within the LIER. After Project completion, the Shag Slough Levee will no longer be part of the State Plan of Flood Control and accessing Shag Slough via the remnant levee and the created waterways via boat will be allowed. The Project design allows for access to bank fishing opportunities in areas considered to be of highest fishing use (west bank of Shag Slough) to the extent feasible within the confines of the Project, meeting its goals and objectives of flood risk management and special-status species habitat restoration (Attachment 3). Following Project implementation, existing users of the bank for fishing would be able to maintain those uses on the remaining Shag Slough Levee segment, spanning approximately 0.16 mile (844 feet) between the top of the Project's property line and the northernmost levee breach (see Figure 3).

2.1.5 Hunting, Fishing, and Wildlife Viewing

The Project will improve wildlife and fish populations by enhancing and creating habitat, thereby increasing the value of the area for hunting, fishing, and wildlife viewing. As covered in Attachment 3 (Section 3), Project Goals 1 and 2 are focused on increasing suitable habitat for native and rare wildlife species of the region. The Project has been designed to increase biological diversity through producing high-quality tidal and other habitat that fish and wildlife of the region depend upon.

Direct benefits of the Project include creating rearing and spawning habitats, improved food web support, and increased high-flow refugia for native fish species. The restoration of tidal wetland habitat will provide important nursery habitat for juvenile fish and the created channels, bordered by tidal wetlands, will provide foraging habitat and cover for native fishes. A key aspect of the Project is maximizing primary productivity that will extend beyond the boundaries of the Project site. The increase in primary productivity will provide food web support throughout the Cache Slough Complex leading to benefits for both fish and wildlife, both on and off the Project site.

The Delta is a critical stopover on the Pacific Flyway for migratory birds including waterfowl (e.g., geese, dabbling ducks, and diving ducks), shorebirds, raptors, and passerines. The Project will benefit these species, as restored intertidal and sub-tidal habitats will provide emergent marsh vegetation and open water for species that nest in dense marsh vegetation or over water. This habitat type will also benefit nesting rails, bitterns, marsh wrens, red-winged blackbirds, and other marsh birds. Created tidal channels will increase habitat for diving ducks, which are less likely to use the current managed wetlands due to their relatively shallow water depth. The restored intertidal wetland habitats will promote the growth of invertebrates, providing medium to high quality forage for waterfowl, shorebirds, and other migratory birds. As a result of the increase in wildlife habitat associated with the Project, the densities of and variability in wildlife will be improved as compared to existing conditions, benefiting recreational users.

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2.1.6 Signage

Based on feedback during listening sessions with CDFW and Solano County Parks (Attachment 3A), the Project will now incorporate extensive wayfinding signage that will be developed and installed to convey essential information about the new recreation opportunities created by the Project (Figure 2). Signs that present an overview of Project information will be posted at both Liberty Island Road turnarounds. The signs will include a detailed site map that depicts restricted areas associated with sensitive habitats, as well as a map of the boat ramp location and tidal channels accessible to the public with mileage markers (Figures 3 and 4). This will allow users of the boat ramp to take a photo of the map prior to entering waterways. Per Solano County's recommendation (Attachment 3A), signage will guide boaters in navigating the tidal channel network within the interior of the Project site. Signs will be posted on either side of each levee breach to serve as an entryway guide to the channels and will be visible from the water level.

Additionally, per CDFW's recommendation (Attachment 3A), signs will also be posted at sensitive habitat areas to alert the public where access is not permitted. These signs will be posted in compliance with applicable California Fish and Game Code and Fisheries Agency Strategy Team requirements. Finally, signs will be posted at the entry point of the Pacific Gas & Electric Company (PG&E) access peninsulas to alert authorized personnel of the safety hazards associated with high-voltage transmission lines and the sensitive habitat restrictions of the access peninsulas.

2.2 Operation and Maintenance (O&M) of Facilities

2.2.1 Vegetation Management

To maintain public accessibility, as well as restoration goals, invasive aquatic vegetation will be managed at the Project site. DWR has an agreement with the Department of Parks and Recreation, Division of Boating and Waterways (DBW)⁵ to monitor and treat invasive vegetation at DWR's Fish Restoration Program (FRP) sites, which includes the Project site. The Project site will be monitored and maintained to minimize invasive species through the DBW's Submerged Aquatic Vegetation and Floating Aquatic Vegetation Control Programs. Monitoring and management will also occur through the Delta Region Area-wide Aquatic Weed Project (a University of California Division of Agriculture and Natural Resources program), which conducts invasive aquatic vegetation research, monitoring, and control in the Delta.

DBW surveys areas where invasive species plant control is needed at FRP sites, and DWR conducts aerial photography of all FRP restoration sites to identify vegetation composition, including invasive species infestations, before and following levee breaching. As described on pages III-47 through III-50 in Chapter III, Project Description of the Draft Environmental Impact

Look out Slough Tidal Habitat Restoration and Flood Improvement Project Public Access Summary

⁵ Standard Agreement between Department of Water Resources and Department of Parks and Recreation for the "Enhanced Control of Aquatic Invasive Plants for the Department of Water Resources Tidal Wetland Restoration Projects." Agreement Number 4600012368. Agreement Term July 1 2018 through June 30 2023.
Report (EIR)⁶ for the Project, levee maintenance and long-term management would remove and minimize upland and aquatic invasive vegetation on the Project site.

2.2.2 DWR Monitoring and Management Activities

To maintain a clean and safe site accessible to the public for recreation, routine maintenance activities will occur on the Project's levees, the interior of the Project site if needed, along shoreline areas where bank fishing may occur, and at the boat ramp. Following the completion of Project construction, RD 2098 will be responsible for maintaining the Duck Slough Setback Levee. DWR will be responsible for maintaining the Cache/Hass Slough Training Levee and the Shag Slough Levee north of the northernmost breach, where the boat ramp will be constructed. Levee O&M activities will include annual inspections and evaluations, levee restoration and damage repair, levee crown roadway maintenance and damage repair, rodent abatement and damage repair, vegetation management, levee debris cleanup, and emergency operations.

As outlined in the Project's Long-term Management Plan and Wetland Reserve Plan of Operations,⁷ DWR will be responsible for monitoring, maintaining, and managing the Project site. DWR or CDFW staff will be present at the site for these activities, which include:

- 1. Adaptive management.
- 2. Post-construction levee O&M, including annual inspections and evaluations.
- 3. Compliance monitoring, including hydrologic, invasive aquatic vegetation, special-status species habitat, and riparian planted habitat performance monitoring.
- 4. Effectiveness monitoring, including measuring indicators of ecological status and function at and near the Project site.

2.2.3 CDFW Delta-Bay Enhanced Enforcement Project Program Agreement

To maintain protected habitat, safeguard imperiled species, and ensure public safety, enforcement is a key component of public and recreational access. The Delta-Bay Enhanced Enforcement Program is an agreement between DWR and CDFW in which DWR provides funding for ten warden positions and two Wildlife Student Assistant positions that provide patrol and enforcement in the Delta, including recent habitat restoration projects (e.g., Yolo Flyway Farms, Lookout Slough, Lower Yolo Ranch). Responsibilities of the wardens under the program include the detection and apprehension of suspects taking special-status fish species; habitat protection, including detection of water pollution violations, illegal water diversion, illegal dumping, and illegal riparian habitat destruction; and targeted enforcement efforts to deter poaching and trespassing. Under this agreement, DWR's FRP sites are prioritized by CDFW wardens in their patrolling and enforcement efforts. The contract for this program is included as Attachment 4B.

Look out Slough Tidal H abitat Restoration and Flood Improvement Project Public Access Summary

⁶ WRA, Inc. 2019. Draft Environmental Impact Report for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co, LLC. Lead Agency: California Department of Water Resources.

⁷ WRA, Inc. 2021 Draft Long-Term Management Plan and Wetland Reserve Plan of Operations for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co., LLC and Prepared on Behalf of Department of Water Resources.



Figure 1: Project Site Existing Conditions

*Sign locations are approximate for illustration purposes only.





Lookout Slough Tidal Habitat Restoration and Flood Improvement Project





- Project Information
- Access Road Restrictions
- **Navigating Waterways**
- Sensitive Habitat Areas

Figure 2: Proposed Project Conditions

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project



Cross Levee

Ecosystem Investment

Partners



Figure 3: Proposed Project Turnaround and Boat Ramp

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project







Prepared by:

Map Prepared Date: 12/6/2021 Map Prepared By: njander Base Source: Wood Rogers Base Date: 10/24/17 Data Source(s): WRA



ENVIRONMENTAL CONSULTANTS

Liberty Island Road

Turnaround

Vehicular Gates Duck Slough Setback Levee

Proposed Gate Location

Proposed Gate Location
 Tidal Marsh Areas
 Open Water
 Duck Slough Setback
 Levee

Posted Sign Category

- Project Information
- Sensitive Habitat Areas

Figure 4: Proposed Project Turnaround

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project







Prepared by:

Map Prepared Date: 12/6/2021 Map Prepared By: njander Base Source: Wood Rogers Base Date: 10/24/17 Data Source(s): WRA



ENVIRONMENTAL CONSULTANTS

B-3 Letter 2: Central Delta Water Agency, Exhibit 3

ATTACHMENT 2E: ADDITIONAL DETAILED RESULTS FROM ON-SITE VISITOR SURVEYS

Additional Detailed Results from On-Site Visitor Surveys

Response	September Visitors	October Visitors
Fishing (primarily for leisure)	80.3%	45.6%
Fishing (primarily for food)	33.3%	41.2%
Paddle Sports	9.1%	1.5%
Hiking	3%	0%
Wildlife Viewing	9.1%	2.9%
Hunting	1.5%	33.8%
Other Activity	6%	6%

 TABLE 16

 Responses¹ to question 1, "What activities do you plan to do here today?"

 TABLE 17

 PROPORTION OF FIRST-TIME VISITORS

Response	September Visitors	October Visitors (Hunters Only)
Yes, first visit	10.8%	14.7% (8.3%)
No, been here before	89.2%	85.3% (91.7%)
Total:	100%	100% (100%)

 TABLE 18

 Responses to question 3, "How often do you come to this area to recreate?"

Response	September Visitors	October Visitors (Hunters Only)
At least once a week	19.3%	15.5% (18.2%)
Once a week	14%	12.1% (9.1%)
Oneamonth	15.8%	6.9% (9.1%)
A couple times a month	17.5%	31% (13.6%)
A few times a year	26.3%	29.3% (45.5%)
Less than a few times a year	7%	5.2% (4.5%)
Total:	100%	100% (100 %)





Figure 6. October Responses to question 2, "how long have you been coming here for recreation?"







TABLE 19 Responses to question 4, "How much time do you typically spend when you're recreating here?"

Response	September Visitors	October Visitors (Hunters Only)
Less than an hour	3.5%	0% (0%)
A few hours	42.1%	31% (18.2%)
About a half a day	38.6%	44.8% (50%)
About a full day	14%	24.1% (31.8%)
More than a full day	1.8%	0% (0%)
Total:	100%	100% (100%)

TABLE 20
RESPONSES ¹ TO QUESTION 5, "WHAT ACTIVITIES HAVE YOU DONE HERE PREVIOUSLY?"

Previous activity	Liberty Is	land Road	On Sha Bri	g Slough dge	In Shag	Slough	Liberty Ecologic	y Island al Reserve
Month of Visitors:	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)
Fishing	84.9%	79.6% (46.7%)	22.6%	16.3% (13.3%)	28.3%	32.7% (53.3%)	40%	30.6% (53.3%)
Paddle Sports	27.3%	40% (50%)	9%	0% (0%)	100%	80% (75%)	27.3%	40% (50%)
Hiking	60%	66.7% (50%)	40%	33.3% (0%)	0%	0% (0%)	80%	66.7% (100%)
Wildlifeviewing	71.4%	50% (0%)	71.4%	50% (0%)	42.9%	25% (50%)	57.1%	50% (100%)
Hunting	0%	5.6% (5.9%)	0%	0% (0%)	0%	5.6% (5.9%)	100%	100% (100%)
Other	n/a	80% (66.7%)	n/a	0% (0%)	n/a	0% (0%)	n/a	40% (66.7%)
1.0:								

¹ Since survey respondents could check multiple responses, they do not sum to 100 percent.

TABLE 21 Responses ¹ to question 6, "How would you generally rate the quality of whatever activities you have done here before relative to other spots in the Delta?"

Recreational Activity	Wo	orse	The	Same	Ве	tter	l do not activity pla	do this in other ces
Month of Visitors:	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)
Fishing	13.5%	6.7% (13.3%)	48.1%	53.3% (40%)	34.6%	44.5% (40%)	3.9%	6.7% (13.3%)
Paddle Sports	0%	0% (0%)	37.5%	0% (0%)	37.5%	57.1% (100%)	25%	42.9% (0%)
Hiking	50%	0% (0%)	0%	16.7% (0%)	50%	33.3% (100%)	0%	50% (0%)
Wildlifeviewing	0%	0% (0%)	20%	12.5% (0%)	60%	37.5 (66.7%)	20%	30.4% (33.3%)
Hunting	100% ²	4.4% (5.3%)	0%	26.1% (21%)	0%	43.5% (52.6%)	0%	50% (21%)
Other	n/a	0% (0%)	n/a	25% (100%) ²	n/a	0% (0%)	n/a	75% (0%)

The quality on previous visits generally was:

^{1.} Since survey respondents could check multiple responses, they do not sum to 100 percent.

^{2.} Represents one response.

TABLE 22

RESPONSES¹ TO QUESTION 7, "WHY DID YOU CHOOSE TO COME HERE OVER OTHER PLACES IN THE DELTA?"

Response	September Visitors	October Visitors (Hunters Only)
It is closeto my home/easy access	61.3%	59.1% (65.2%)
No fees/free parking	14.5%	37.9% (52.2%)
I usually have a better experience here	33.9%	39.4% (30.4%)
The place I would rather be recreating at is closed now	1.6%	15.2% (8.7%)
I read on the internet that conditions are good for my activity here (e.g., fishing forums, kayaking groups, social media posts, etc.)	6.5%	9.1% (0%)
It was recommended to me by someone I know	11.3%	13.6% (8.7%)
Other	8%	12% (21.5%)

¹ Since survey respondents could check multiple responses, they do not sum to 100 percent.

Activity	Specify Location					
Fishing	Rio Vista (28) Grizzly Island (22) Suisun Bay/Marsh (18) Lake Berryessa (6) Isleton (6) Sacramento River (6) Knights Landing (4) 8 Mile Road (3) Bran nan Island (3) Everywhere in Delta (3) Sherman Island (3) West Sacramento (3) Yolo Bypass (3) Antioch (2) Deep Water Channel (2) Everywhere in Delta (2) Freeport (2) Miner Slough (2) Napa (2) Prospect Island (2) Sacramento (2) West Sacramento (2) Wimpy's Marina (2)	Antioch River (1) Aqueduct Canal (1) Arrowhead Launch (1) B&W Resort (1) Bacon Island (1) Bay Side (1) Belden's Landing (1) Cruise Island (1) Did not specify location (1) Eddo's Harbor & RV Park (1) Folsom Lake (1) Folsom Lake (1) Folsom Lake (1) French Tacks (1) Garden Highway (1) Georgiana Slough (1) Hastings Island (1) Hosings Island (1) Holland Reservoir (1) Holland Reservoir (1) Jefferson (1) Knight's Island (1) Lake Malasy (1)	Lazy Inn (Near Glenwood) (1) Liberty Island (1) Lodi (1) Marsh Canal (1) Merritt Island (1) Montezuma (1) Mothball Fleet (1) Nurse Slough (1) Paradise (1) Pirate's Lair (1) Putah (1) Richmond (1) Ryer Island (1) Sacramento Delta (1) Sloughs in the area (1) Snog Grass Slough (1) Snug Harbor (1) Steamboat Slough (1) Sturgeon Island (1) Sugar Barge Resort (1) Tracy (1) Vacaville (1) Whiskey Slough (1) Yolo County (1)			
Paddle Sports	Suisun Marsh (3) Rio Vista (3) Grizzly Island (2) Antioch (1)	Deepwater Channel (1) Isleton (1) Prospect Island (1) Prospect Slough (1)	Sacramento River(1) South Fork American River (1)			
Hiking	All Over (1) Grizzly Island (1) Isleton (1)	Prospect Island (1) Rio Vista (1) Ryer Island (1)	Snug Harbor (1) Suisun Marsh (1) Yolo (1)			
Wildlife Viewing	Rio Vista (2) Yolo Bypass (2) Davis (1) Grizzly Island (1)	Isleton (1) Lake Berryessa (1) Prospect Island (1) Ryer Island (1)	Snug Harbor (1) Suisun Marsh (1) Woodland (1) Yolo (1)			
Hunting	Grizzly Island (6) Suisun Marsh (3) Did Not Specify Location (3) Rio Vista (2) Hastings (1)	Mothball Fleet (1) Prospect Island (1) Prospect Slough (1) Sonoma Marshes (1)	Staten Island (1) The Valley (1) Venice Island (1) Yolo (1)			
Other	Lower Sherman (not for hunting)	(1)				

 TABLE 23

 Responses to question 8 "Do you go to any other areas in the Delta to participate in the Following activities?"-September and October Surveys

TABLE 24
RESPONSES TO QUESTION 9 "IS THERE ANYTHING ELSE ¹ YOU WANT TO TELL ME ABOUT THIS VISIT, OR
PREVIOUS VISITS HERE?" – SEPTEMBER SURVEYS

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	22	24%
Enjoy location	11	12%
Notcrowded	4	4%
Easy access	3	3%
ls safe	3	3%
Does not like trees by the Bridge	1	1%
Wants more preservation of outdoors and opportunities to fish and hunt	1	1%
More marketing of natural areas	1	1%
Want boat/kayak laun ch	3	3%
Proposed launch too far from the LIER	1	1%
Concerned about public access - road, Bridge, and water	9	10%
Wants camping	1	1%
Wants fish cleaning station	1	1%
Add toilets	1	1%
More trees	3	3%
More law enforcement patrols	2	2%
Scouting for duck hunting	1	1%
Prefer shore fishing over boat	1	1%
Dogs off-leash allowed	1	1%
Mosquitos	1	1%
With tank getting water	1	1%
Fish does not bite	1	1%
Unaware of the project	1	1%
No comment/did not know enough to an swer	16	18%
Total:	90	100%
¹ Respondents could mention multiple comments	•	•

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	9	9%
Enjoy location	14	14%
Not crowded/Quiet	9	9%
Easy access	9	9%
Wants to maintain open space/public access	4	4%
Want boat/kayak launch	2	2%
Concerned about public access – road, Bridge, and water	8	8%
Wants more parking	2	2%
More trees	1	1%
More law enforcement patrols	1	1%
Scouting for duck hunting	1	1%
Concerns about shutting down the place/charging for entering	4	4%
Bass boat out of Shag Slough	1	1%
Concerns about changes in fishing	1	1%
Concerns about water level	1	1%
Dogs off-leash allowed	1	1%
Fishing is not as good as before	1	1%
No comment/did not knowenough to answer	30	30%
Total:	99	100%

 TABLE 25

 Responses to Question 9 "Is there anything else¹ you want to tell me about this visit, or previous visits here?" – October Surveys

¹Respondents could mention multiple comments

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	2	5%
Enjoy location	5	12%
Not crowded/Quiet	2	5%
Easy access	5	12%
Wants more preservation of outdoors and opportunities to fish and hunt	1	2%
More marketing of natural areas	1	2%
Want boat/kayak launch	2	5%
Concerned about public access - road, Bridge, and water	5	12%
More law enforcement patrols	1	2%
Scouting for duck hunting	2	5%
Concerns about shutting down the place/charging for entering	3	7%
Bass boat out of Shag Slough 1 29		2%
No comment/did not know enough to an swer 11 2		
Total:	41	100%

 TABLE 26

 Responses to Question 9 "Is there anything else¹ you want to tell me about this visit, or previous visits here?" – Hunter Surveys

¹ Respondents could mention multiple comments.

B-4 Letter 3: Liberty Island Access, Attachment 1

ATTACHMENT 1 – ANALYSIS RESPONDING TO REMANDED ISSUES AND SUPPORTING RE-CERTIFICATION OF CONSISTENCY WITH THE DELTA PLAN

LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT

Solano County, California

Prepared For:

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

Prepared on Behalf Of:

EIP III Credit Co., LLC 2330 Marinship Way, Suite 120 Sausalito, CA 94965 Contact: Stephanie Freed stephanie@ecosystempartners.com

Prepared By:

Environmental Science Associates 2600 Capitol Avenue, Suite 200 Sacramento, CA 95816

Date: December 2021





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1. Introduction

The California Department of Water Resources (DWR) filed a *Certification of Consistency for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Certification) with the Delta Stewardship Council (DSC) on February 22, 2021. The DSC released the *Determination Regarding Appeals of the Certification of Consistency by the California Department of Water Resources for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Determination) on July 16, 2021. In the Determination, the DSC remanded specific issues under two Delta Plan policies to DWR for reconsideration, which are the following:

- **G P1(b)(3): Best Available Science**, as to the issue of methods to estimate recreational use as it relates to the Best Available Science criterion of Inclusiveness.
- DP P2: Respect Local Land Use When Siting Water or Flood Facilities or Restoration Habitats, as it relates to identification and avoidance or reduction of conflicts with existing recreational uses on and near the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project) site.

All appeals related to other Delta Plan policies or portions of appeals related to G P1(b)(3) or DP P2 not specifically listed above were dismissed or denied in the DSC's Determination as: (1) they were not appealable or within DSC jurisdiction, (2) the Appellants failed to show that there is not substantial evidence in the record to support DWR's Certification of Consistency, (3) the appealed Delta Plan policies do not apply to the Covered Action, or (4) the Appellants failed to provide the required specificity. See Determination, Sections F and G.

This document (Attachment 1 to the Re-Certification) is part of the Re-Certification of Consistency for the Project (Re-Certification). The Project has not changed in design, nor has any element of the Project changed or been updated such that reconsideration of Certification under any Delta Plan policy or portion of a policy is necessary other than the two remanded to DWR for reconsideration. No changes to the Project design or mitigation measures have been made that would change the Project's consistency with the mitigation measures listed under Delta Plan Policy G P1(b)(2).

This document responds specifically to the two policies that DSC remanded in the Determination, and the sections below are organized to mirror the DSC's discussion as presented in the Determination. This document references several technical attachments for supporting information: Attachments 2, 3, and 4 to the Re-Certification. These technical attachments provide the DSC with additional information and evidence for the record to support DWR's Re-Certification of Consistency for the Project.

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2. DSC Finding on Consistency with Policy G P1(b)(3) with Regard to Methods to Estimate Recreational Use as it Relates to the Criterion of Inclusiveness

2.1 Inconsistent Use of Census Tract Data

2.1.1 Summary of Determination Findings on Remanded Issue

In the Determination (Section 3.c.i), the DSC states that a single census tract was used in one aspect of the evaluation of existing recreational use of the Project site, that being the larger of the two census tracts that occur on the Project site. Additionally, in determining potential impacts of the Project on other nearby recreational facilities, DWR cites to evidence that adult recreationists in California travel between 21 and 60 minutes to the places they visit most often for recreation. The Appellant in this case asserted that, given the latter statistic related to recreationists' willingness to drive up to 60 minutes, all census tracts within a 60-minute driving radius of the Project site should have been used to estimate recreational use at the site. The DSC found in its Determination that DWR had access to these census tract data and that DWR did not explain or identify evidence in the record demonstrating that excluding additional census tracts covered by the Project site or within a 60-minute driving radius from the site constitutes the use of Best Available Science, specifically as it pertains to the Inclusiveness criterion.

2.1.2 Analysis Supporting Re-Certification

While having access to additional census tract data would have allowed for an estimation of recreational use on the Project site to be calculated in the manner requested by the Appellant, this would have a limited purpose. A thorough review of relevant information and analyses across relevant disciplines, as required by the Inclusiveness criterion, has shown that applying additional census tract data alone (using the method recommended by the Appellant) may drastically overestimate a site's recreational use and therefore does not constitute Best Available Science (Attachment 2, Section 2.2). It is well-established in the recreation resource research community that, due to the multiple weaknesses associated with employing a single approach to estimating visitation levels, it is desirable to combine multiple variables to develop a more complete recreation estimation model. Appropriate variables to consider in model development include travel time to the subject recreation site, population age and income, availability of substitute recreation sites, and/or congestion at the subject recreation site (Attachment 2, Section 2.2).

Attachment 2, Section 2.2, details the science and research behind DWR's applied methodology for estimating recreational use, which included the use of population data as one step in estimating bank fishing rates at the Project site, as part of a multi-pronged approach to overall estimation of site usage. Specifically, the analysis included population data (obtained from the larger of the two census tracts on the Project site) to estimate fishing rates for the local population based on recent survey data (from a 2019 study commissioned by the Delta Protection Commission),¹ and then used that information to estimate the approximate percentage of overall anglers that fished from the bank (using survey data obtained from an economic survey of Central Valley anglers published in 2018).² DWR's methodology applied a 60-minute driving radius to address a completely different question from the California Environmental Quality Act (CEQA) Guidelines Appendix G. This methodology focuses on assessing recreational impacts of a project by asking whether the project would increase use of existing neighborhood and regional recreational resources such that substantial physical deterioration would occur.

To assess this potential impact as required by CEQA, DWR used a generalized worst-case scenario in applying a 21 to 60-minute driving radius, based on recreation research literature³, to attain a list of other recreational sites in the vicinity of the Project site. Mixing or combining the established and well-researched methods to answer these two very different questions (approximate number of bank fishers at the Project site versus the potential of the Project to negatively affect other regional recreation resources) would not constitute Best Available Science. This is further confirmed by the compilation of research published by Loomis and Walsh (cited in Attachment 2, Section 2.2), which contains a thorough review of many well-accepted recreation studies, showing that approximately 66 percent of all recreational use originates from within a 25-mile radius of the recreational site. This research substantiates one of the guiding principles behind DWR's recreational use estimation methodology (i.e., that most recreational use is local), and supports that DWR used relevant information across relevant disciplines (as required by the Inclusiveness criterion) to develop the most appropriate methodology for estimating recreational use. Further, this review of relevant research shows that estimating recreational use at the Project site by applying population data for all census tracts within a 60-minute driving radius would overestimate recreation use at the Project site and would therefore not constitute Best Available Science (Attachment 2, Section 2.2).

In addition, since release of the Determination, DWR has reviewed its methodology for estimating recreational use at the Project site by interviewing subject matter experts in the recreation resource research field (Attachment 2, Section 3.1), conducting further literature review (Attachment 2, Sections 2.2 and 3.2), and conducting on-site studies including vehicle counts via aerial photography analysis (Attachment 2, Section 3.4.1), vehicle counts via motion-activated cameras (Attachment 2, Section 3.4.2), and in-person visitor surveys at the Project site (Attachment 2, Section 3.4.3). The additional on-site recreational surveys and interviews were completed, in part, based on the recommendation of the Delta Protection Commission (DPC) and Liberty Island Access (LIA) group during the DSC public hearing process and during listening

¹ Mickel A, Taylor S, and Shaw G. May 2019. Recreation & Tourism in the Delta, n.d., 81.

² Thomson C and Kosaka R. May 2018. Results of the 2015 economic survey of Central Valley Anglers, p. 20.

³ California State Parks. 2014. Survey on Public Opinions and Attitudes towards Outdoor Recreation in California. Viewed online: https://www.parks.ca.gov/pages/795/files/2012%20spoa.pdf.

sessions conducted by DWR after the DSC Determination was released (see Attachment 3A for meeting notes). In addition, the aerial photography analysis supplements what the LIA Appellant presented during the May 2021 public hearing. Details and results of these additional data confirm previous estimates of recreation use at the Project site (Attachment 2, Sections 4 and 5). Thus, substantial evidence supports DWR's determination of consistency with this policy as remanded.

2.2 Potential Underestimation of Existing Recreational Use and Effect on Consistency with Policy DP P2

2.2.1 Summary of Determination Findings on Remanded Issue

In the Determination (Section 3.c.i), DSC states that, if recreational use numbers were underestimated due to a failure to use Best Available Science in developing a methodology for estimating recreational use, as discussed above, this may have influenced DWR's failure to identify and thereby avoid or reduce conflicts with existing recreational uses. The DSC further explains that a failure to include the population of all census tracts within a 60-minute driving radius of the Project site could have resulted in an underestimate of recreational use by an order of magnitude, pointing to the fact that the population of the single census tract used by DWR to estimate the number of potential bank anglers that use the Project site is 10,000, whereas the combined population of the six cities within a 60-minute driving radius is 743,522.

2.2.2 Analysis Supporting Re-Certification

DWR has confirmed through new data (vehicle counts and visitor surveys) collected since the release of the Determination that the recreational use numbers analyzed previously are appropriate and were not underestimated by an order of magnitude. As summarized in the Determination, the bank fishing use estimation methodology used the population of the larger of the two census tracts on the Project site and then applied recently surveyed Delta fishing rates (from 2019)⁴ to arrive at an estimate that there are approximately 200 local residents⁵ who partake in fishing. Based on recent survey results of Central Valley anglers (from 2018),⁶ it was estimated that approximately 40 percent of those 200 anglers (80 individuals) fish from the bank.

Since the release of the Determination, DWR conducted a review of aerial photography over a 5year period (2016-2021), which shows vehicle counts ranging from 2 to 24 vehicles per day, with an average of 10 vehicles per day (Attachment 2, Section 4.1). Vehicle counts conducted on the Project site using motion-activated cameras (collected from August 2 through October 31, 2021) captured an average of 24 and 36 vehicles per day along Liberty Island Road on Shag Slough Levee to Shag Slough Bridge on weekdays and weekend days, respectively (Attachment 2,

⁴ Mickel A, Taylor S, and Shaw G. May 2019. Recreation & Tourism in the Delta, n.d., 81.

⁵ WRA, Inc. 2019. Draft Environmental Impact Report for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Section IV.J, p. IV.J-6. Prepared for EIP III Credit Co, LLC. Lead Agency: California Department of Water Resources.

⁶ Thomson C, and Kosaka R. May 2018. Results of the 2015 economic survey of Central Valley Anglers, p. 20.

Section 4.2). These counts represent more than just recreational use, also including work vehicles such as Pacific Gas & Electric Company (PG&E) and Reclamation District vehicles and agricultural users.

In addition, daily visitor survey results (conducted over six days of September 2021 and two days of October 2021) reflected a total of 360 visitors over eight days (or approximately 45 visitors per day) to the study area, which included Liberty Island Road atop Shag Slough Levee, the Shag Slough Bridge, and the remnant levees within the Liberty Island Ecological Reserve (LIER) combined (Attachment 2, Section 4.3.1). This time frame included the Labor Day holiday and opening day of waterfowl hunting season, which are both typically known for high recreational use. A total of 189 visitors were observed over the September survey period and a total of 171 visitors were observed over the October survey period. Not all visitors chose to be surveyed, but applying the results of the surveyed respondents to the overall totals of observed visitors shows that approximately 80 percent of visitors during the September timeframe (or 151 visitors) and 46 percent of visitors during the October timeframe (or 79 visitors) were recreating at the site to fish. This results in an estimation of 230 anglers visiting the site over the survey period, which confirms DWR's original range of estimated fishing use (approximately 200). It should be noted that the numbers reported above are likely very conservative estimates of the number of anglers who use the Project site, given that high recreation use weekends (Labor Day, opening day) were evaluated, and particularly considering that the on-site survey data show that 89 percent of visitors tend to be repeat visitors to the site (Attachment 2, Table 17) and a significant proportion of visitors may come more than once per week (Attachment 2, Table 18).

Surveys conducted on October 23 and 30, 2021, over opening day of hunting season and the Saturday immediately following opening day, were specifically chosen to capture the most conservative estimate of hunting use of Shag Slough Levee and the LIER (as hunting numbers tend to be highest on opening day). Over the course of the two-day survey period, 26 hunters were contacted, and 24 were willing to be surveyed. A total of 20 hunters were surveyed on opening day, and only four were surveyed the following Saturday, indicating a sharp decline in use following the excitement of opening day (Attachment 2, Section 4.3.2).

Additional results of recreation literature review and the 2021 on-site recreation use study reaffirmed the following key points of DWR's original recreation evaluation: (1) although the LIER is a popular fishing location with some local residents, it is a relatively low use area (Attachment 2, Section 2.2); (2) most shoreline fishing use in the vicinity occurs along Liberty Island Road on the western bank of Shag Slough (not on the LIER) (Attachment 2, Sections 4.1 and 4.3.1); and (3) most anglers use other recreation sites in the vicinity as well and do not feel particular fidelity for the recreation opportunities provided by the Project site (Attachment 2, Section 4.3.1). Additional details on the methodology and results of these data are included in Attachment 2, Sections 3.4 and 4. However, please see the section below related to issues remanded under DP P2 for further discussion on DWR's reconsideration of recreational use conflicts and additional information about DWR's strategies to avoid or reduce these conflicts.

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3. DSC Finding on Consistency with Policy DP P2 with Regard to Conflicts with Existing Recreational Uses

In Section G.10 of the Determination, the DSC makes several findings regarding appeals based on issues under DP P2. The specific matters being remanded to DWR for reconsideration under DP P2 are:

- A lack of substantial evidence in the record that Liberty Island Road, Shag Slough Bridge, and the LIER do not constitute existing uses.
- A lack of evidence in the record that the Project would not conflict with existing recreational uses of Liberty Island Road, Shag Slough Bridge, and the LIER.
- A lack of substantial evidence in the record that DWR avoided or reduced conflicts with existing recreational uses of Liberty Island Road, Shag Slough Bridge, and the LIER when siting the Project.
- The need for DWR to provide details regarding an assessment of the feasibility of avoiding or reducing conflicts if DWR determines that the Project would conflict with existing recreational uses in a future Certification of Consistency.

3.1 Identification of Existing Recreational Uses

3.1.1 Summary of Determination Findings of Remanded Issue

The DSC states in the Determination (Section 3.10.i.a) that there is evidence in the record substantiating that LIER is accessed by the public for recreational activities that include waterfowl hunting, fishing, boating, and wildlife viewing. The DSC also states that additional evidence in the record shows that bank fishing and boating in small, non-motorized watercraft are existing recreational uses both at the LIER and on the banks of Shag Slough. DWR noted previously that there are no authorized recreational facilities on Liberty Island Road or Shag Slough Bridge, noting site conditions that include "No Parking Anytime," "No Parking on Bridge," and "No Trespassing" signs located along Liberty Island Road by Shag Slough Bridge. However, in the Determination, the DSC states that the "No Trespassing" sign seems to indicate that no trespassing is permitted on the waterside of the Shag Slough Levee and that the "No Parking" sign seems to indicate that parking is prohibited along a portion of the eastern side of Liberty Island Road. The DSC stated that DWR has not pointed to evidence in the record that prohibits parking on the west side of Liberty Island Road or restricts travel on Liberty Island Road or Shag Road or Shag Slough Bridge, nor has DWR shown that travel along Liberty Island Road or Shag

Slough Bridge in order to access the LIER to launch kayaks or for bank fishing constitutes trespass. The DSC also argued that there was no substantial evidence in the record documenting who posted the "No Parking" and "No Trespassing" signs.

3.1.2 Analysis Supporting Re-Certification

DWR has confirmed that the "No Parking Any Time" and "No Trespassing" signs were posted by Solano County.⁷ DWR has further confirmed that County Ordinance No. 521 (Attachment 4A) expressly prohibits parking along the western side of Liberty Island Road from Shag Slough Bridge to a point 1.5 miles north thereof.

DWR's original assessment of conflicts with recreational use at the Project site was mainly seated in the understanding that there were no authorized existing uses of Liberty Island Road or Shag Slough Bridge. However, while County parking restrictions and the private ownership of the land on the waterside of Liberty Island Road within the Project site signify that some on-site recreational uses are "unauthorized," there are nevertheless a mix of authorized and unauthorized uses on the site and within its vicinity. Of particular importance in this discussion are the allowable uses that occur on the LIER. DWR confirms that Liberty Island Road, Shag Slough Bridge, and the LIER have existing recreational uses and that the Project would conflict with these existing recreational uses by vacating a portion of Liberty Island Road and cutting off pedestrian access to the LIER by removing access to the Shag Slough Bridge.

3.2 Conflicts with Existing Recreational Uses

3.2.1 Summary of Determination Findings on Remanded Issue

In the Determination (Section 10.c.i.b), the DSC argues that the Appellant identified evidence in the record to show that the Project would conflict with existing recreational uses of Liberty Island Road, Shag Slough Bridge, and the LIER by impeding access to public lands at the LIER and navigable waterways by removing the only pedestrian access to the LIER. DP P2 requires that covered actions for ecosystem restoration projects and flood management infrastructure be sited to avoid or reduce conflicts with existing uses when feasible, considering comments from the Delta Protection Commission and local agencies, which requires those existing uses and conflicts to be properly identified. DSC also stated that any potential failure of DWR to properly account for existing uses and to avoid or reduce conflicts with existing uses may be due to an underestimation of bank fishing at the LIER, as discussed previously in Section 2.2.

3.2.2 Analysis Supporting Re-Certification

As noted previously, DWR confirmed that Best Available Science was used to develop the methodology to estimate recreational use in the vicinity of the Project. DWR also confirmed that previous estimates of recreational use are as accurate as possible given available data and the use

Williams G, Western Region Projects Director, Ecosystem Investment Partners, personal communication, February 3, 2021.

of scientifically supported approaches to estimating visitation. DWR's identification of existing recreational use and assessment of conflicts was not based purely on the estimates of recreational use as discussed in Section 2 of this document; rather, DWR's previous position was based on a characterization of authorized versus unauthorized use in the Project vicinity. Upon consideration of the full record, DWR confirms that Liberty Island Road, Shag Slough Bridge, and the LIER constitute existing recreational uses and that the Project would conflict with these existing recreational uses by vacating a portion of Liberty Island Road and removing pedestrian access to the LIER.

3.3 Siting of the Project to Avoid/Reduce Conflicts with Existing Recreational Uses

3.3.1 Summary of Determination Findings on Remanded Issue

In the Determination (Section 10.c.i.c), DSC states that DWR did not describe efforts to reduce or avoid conflicts with existing recreational uses of Liberty Island Road, Shag Slough Bridge, and the LIER and that there was a lack of documentation in DWR's Certification regarding whether and how the Project was sited to avoid or reduce conflicts with existing recreational use. Based on this, DSC argued that DWR did not properly consider existing recreational use at the time of Certification. The DSC specifically points to:

- A lack of evidence in the record to indicate that the section of Shag Slough Levee north of the northernmost breach would provide public access for bank fishing.
- A lack of evidence in the record that the new boat ramp and gate would allow public pedestrian access for hand-launching small watercraft.
- A lack of evidence in the record that pedestrians would have recreational access to levees on the Project site.⁸
- A lack of evidence in the record clarifying the terms or extent of restrictions on public access included in the conservation easement.

3.3.2 Analysis Supporting Re-Certification

Siting of the Project was an extensive process, as specific elevation profiles and biological characteristics were necessary for the Project to meet the habitat restoration and flood storage and conveyance requirements. DWR chose to site the Project at its location, among other reasons, because: (1) it is within the Cache Slough Complex, which State and federal wildlife agencies (including the DSC⁹) consider a prime area to advance tidal wetland habitat restoration due to its connectivity with the Yolo Bypass floodplain, suitable elevations, high turbidity, high primary and secondary productivity, and use by Delta Smelt, Chinook salmon, and other native

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⁸ This finding references a statement made by DWR during the May 2021 public hearing process that the walkways along the levees on the Project site would be accessible for birdwatching, hiking, and strolling.

⁹ DSC. 2013. Delta Plan, Chapter 4 - Protect, Restore, and Enhance the Delta Ecosystem. Figure 4-8 Recommended Areas for Prioritization and Implementation of Habitat Restoration Projects. p. 151.

fishes;^{10,11,12} (2) other sites suitable for large-scale habitat restoration in the North Delta region have already been or are undergoing restoration;¹³ (3) the location allows for connectivity with other habitat restoration projects;¹⁴ and (4) its location allows for expansion of the lower portion of the Yolo Bypass to decrease the risk of flooding in and around the Lower Sacramento River.¹⁵ To the latter point, the 2012 Central Valley Flood Protection Plan and 2017 Update call for expansion of capacity in the lower Yolo Bypass, where the Project is located, including incorporation of multi-benefit improvements. Additional capacity in this area will have important flood risk reduction benefits from Rio Vista to Sutter County and into the Greater Sacramento Area.¹⁶

In addition to avoiding or reducing conflicts with existing recreational uses where feasible, Project siting discussions included the need to avoid or reduce conflicts with other existing uses in and around the Project site. These uses included: agricultural operations, existing infrastructure, existing water intakes and the resulting beneficial uses of water and/or conflicts with diversions related to endangered species, and conflicts with goals and uses as described in the Solano County General Plan. These other existing uses were discussed in the Determination (Sections G.10.c.ii through G.10.c.vii), and the DSC found there was substantial evidence in the record that the Project was consistent with DP P2 as it relates to analyzing and avoiding or reducing conflicts with these uses when feasible.

DWR examined conflicts with recreational use at the Project site early on in Project design¹⁷ and conducted extensive public outreach to engage stakeholders in designing the Project to best avoid or reduce conflicts with recreation and other uses. These outreach efforts included: posting the Project for public review throughout multiple design phases based on the requirements of CEQA and the Section 408 process; holding public meetings in April 2019 and January 2020 to solicit public feedback on the 30 percent and 60 percent project design, respectively; and offering additional public briefings above and beyond what is required by the formal California

¹⁰ DWR, 2016. Request for Proposal Secondary Department of Water Resources. December 20, 2016. Request for Proposal Secondary (RFP) number 10127576 for habitat restoration within the Sacramento-San Joaquin Delta (Delta) and Suisun Marsh in the lower Sacramento River Basin.

¹¹ DWR. 2012. Fish Restoration Program Agreement Implementation Strategy. Department of Water Resources and Department of Fish and Game in Coordination with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

¹² USFWS. 2008. BiOp Delta Smelt Crediting Decision Model.

¹³ DWR. 2020. California EcoRestore Highlights 2015 to 2020. May 2020. Viewed online: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/EcoRestore/EcoRestore-5YR-Fact-Sheet_ay20.pdf.

¹⁴ Ibid.

¹⁵ DWR. 2016. Basin-Wide Feasibility Studies –Sacramento River Basin – Draft, p. 5-25, Figure 5-13, Yolo Bypass Option 3. Sacramento, CA.

¹⁶ DWR. 2017. Central Valley Flood Protection Plan 2017 Update, p. 3-15, Map 3-4, Yolo Bypass Multi-Benefit Improvements Hydraulic Performance for 200 year Event with Climate Change. August 2017.

¹⁷ Ecosystem Investment Partners. 2017. Lookout Slough Restoration Project: Restoring the North Delta Habitat Arc for fish habitat and flood control, Design Workshop Planning Meeting, December 19, 2017.

environmental review process in October 2020, to be responsive to commenters on the Draft EIR.¹⁸

As part of the review of regulatory, local, State, and federal stakeholders, discussions occurred for several years during Project development regarding the balance between the Project's primary objectives and existing recreational use at the site. Through iterative drafts and multiple reviews by these stakeholders, the Project was sited at the chosen location to reduce or avoid the majority of overall potential conflicts with all existing uses at the site; however, it was determined that the Project would result in an unavoidable conflict with recreational use at the Project site.

Because siting the Project at a different location in order to completely avoid recreation conflicts was not feasible (due to the landscape requirements for habitat and flood benefits and to avoid conflicts with other existing uses), DWR included several Project design features to reduce conflicts with existing recreational uses. These features are briefly summarized below. A more detailed description of public access and recreation features on the Project site designed to reduce conflicts with existing recreational use to the extent feasible is included as Attachment 4.

- <u>Liberty Island Road Vehicle Turnarounds.</u> As part of Project design, Liberty Island Road will be improved along the segment at the northern boundary of the Project site, and two new paved turnaround areas will be created (Attachment 4, Section 2.1.3). The turnaround areas will be able to accommodate a safe turning radius for large trucks such as local agricultural vehicles and vehicles towing trailers. Formal parking was not incorporated into the Project design as there are currently no designated parking areas on the existing Project site, but existing informal uses within the road right-of-way can continue per existing Solano County ordinances on the portion of Liberty Island Road that remains following Project implementation.
- <u>A Publicly Accessible Boat Ramp.</u> While DWR originally anticipated that the boat ramp to be installed at the north side of the northernmost breach of Shag Slough Levee would be primarily used by public agencies, DWR herein states for the record that the boat ramp will be publicly accessible for hand-launching watercraft (as further outlined in Attachment 4, Section 2.1.2). There will be a locked vehicular gate across the roadway between the boat ramp and a vehicle turnaround at the terminus of Liberty Island Road in order to prevent unauthorized vehicular access, but the Project provides pedestrian access around the vehicular gate to facilitate hand-launching of watercraft at the boat ramp. For reasons related both to public safety due to expanding the Yolo Bypass and protection of sensitive special-status species habitat, public vehicular access past the gate onto the levee is not compatible.
- <u>Over 20 miles of Additional Navigable Public Tidal Channels.</u> These newly created channels will provide public accessibility for recreational use by watercraft users such as boaters (both motorized and non-motorized) and kayakers, anglers, hunters, and wildlife enthusiasts (Attachment 4, Section 2.1.1).

¹⁸ DWR. 2021. Response to Draft Staff Determination for C20215, Lookout Slough Tidal Habitat and Flood Improvement Project. June 28, 2021.

- <u>Bank Fishing.</u> Surveys of recreationists at the Project site have shown that 86 percent of visitors who fished used the western bank of Shag Slough, and not the eastern bank on the LIER side (Attachment 2, Section 4.3.1). Following Project implementation, existing bank anglers at the site would be able to maintain those uses on the remaining Shag Slough Levee segment north of the northernmost Shag Slough Levee breach (Attachment 4, Section 2.1.4). Access would be allowed in the same fashion as described for the boat ramp above. DWR included this design feature to create access to bank fishing opportunities to the greatest extent feasible within the confines of the Project meeting its habitat restoration and flood storage and conveyance objectives.
- <u>Signage</u>. As detailed further in Attachment 4, Section 2.1.6, extensive wayfinding signage will be developed and installed to convey essential information about the new recreation opportunities created by the Project. Signage will be posted on either side of each levee breach location to serve as an entryway guide for the newly created navigable tidal channels, and signs will also be posted at each Liberty Island Road turnaround with an overview of Project information and detailed site maps. In addition, signs will be posted near sensitive habitat areas (to identify restricted areas that do not permit public access) and at PG&E access peninsula entry points (regarding the safety hazards associated with high-voltage transmission lines and the associated sensitive habitat restrictions of the access peninsulas). These signage features were added to the Project design upon the suggestion of recreation stakeholders. During listening sessions conducted by DWR after the DSC Determination, Solano County suggested wayfinding signage, and the California Department of Fish and Wildlife (CDFW) suggested signage indicating sensitive habitat areas and demarcating PG&E accessways. See Attachment 3A for the full meeting notes.

As noted in the Determination, during the May 20 and 21, 2021 DSC public hearings, DWR acknowledged that while the Project's internal levees are not proposed as formal public facilities, existing public uses of these and other existing flood control levees in the vicinity (such as walking, birdwatching, and hiking) may continue to occur following Project implementation. As noted at the beginning of this section, the DSC specifically points to a lack of evidence in the record that pedestrians would have recreational access to levees on the Project site in its Determination (Section 10.c.i.c., page 108). DWR's consideration of this public access option is detailed in Section 3.4 below and in Attachment 3, Section 5.1; please see these sections for a full analysis of why this option is not feasible and why DWR would like to clarify and confirm for the record that recreational uses of Duck Slough Setback Levee, Cache/Hass Levee, and the habitat areas of the Project site are not approved uses. Recreational uses of the Project site will be limited to open water channels and along the northernmost section of Shag Slough Levee that provides access to the boat ramp.

DWR would also like to clarify the extent of restrictions on public access included in the site's conservation easement, as called for in the Determination (Section 10.c.i.c., page 108). Three perpetual Wetland Reserve Program (WRP) easements currently exist over approximately 1,654 acres of the Liberty Farms property. The deeds for the existing WRP easements outline prohibited uses, which include use restrictions related to motorized vehicles in tidal habitat areas, altering wildlife habitat or natural features, dumping, and disturbing or interfering with wildlife, among other uses. A full list of uses prohibited by the WRP easements is outlined in Attachment 3, Section 5.3.1. Following restoration, placement of an additional conservation easement is a

condition of the Project's Incidental Take Permit (ITP) and is mandated for the Project to receive full creditable acreage ^{19, 20}, and restored sensitive habitat areas will be managed and maintained by CDFW and others (as described in Attachment 4, Section 2.2) to ensure the Project site is maintained in a natural and open space condition. This conservation easement will extend across all habitat restoration areas within the three properties of the Project site and will include the current encumbered WRP easement areas. This conservation easement has not yet been finalized but will include the limitations set forth in the Long-term Management Plan and Wetland Reserve Plan of Operations (LTMP/WRPO) and Prospectus that have already been developed for the Project. In addition, the ITP for the Project mandates specific restrictions on public uses in order for the Project to receive habitat credits, which will be incorporated in the conservation easement as a condition of approval of the ITP. DWR has had multiple conversations with CDFW regarding the public access features outlined in Attachment 4 and confirms that public access to the 20 miles of additional navigable tidal channels will be a legally allowed public use under the conservation easement; however, public access to intertidal habitat areas associated with restored tidal wetland habitats would be prohibited.

3.4 Feasibility of Avoiding and Reducing Conflicts with Existing Recreational Uses

3.4.1 Summary of Determination Findings on Remanded Issue

In the Determination, a conclusion was not reached regarding the issue of whether siting the Project to avoid or reduce conflicts with existing uses was feasible "because the Certification [was] not supported by substantial evidence in the record that the Department considered existing recreational uses... or analyzed whether there [was] a conflict with such uses, or whether the Project was sited to avoid or reduce conflicts with such uses (Section G.10.c.i.e)." The DSC points to a lack of substantial evidence in the record to support DWR's claim that conversations in early Project design occurred that showed it was infeasible to install a bridge at a different location to maintain access to the LIER. More broadly, the DSC finds a lack of substantial evidence in the record or reduce conflicts with existing recreational uses or to support DWR's claims that maintaining the current level of access for bank fishing within the LIER and public pedestrian access to the Bridge would be infeasible.

3.4.2 Analysis Supporting Re-Certification

As outlined in previous sections of this document, DWR confirms the existing recreational uses of Liberty Island Road, Shag Slough Bridge, and the LIER and that the Project would create conflicts with these existing recreational uses. DWR sited the Project carefully to emphasize its

¹⁹ DWR, 2016. Request for Proposal Secondary Department of Water Resources. December 20, 2016. Request for Proposal Secondary (RFP) number 10127576 for habitat restoration within the Sacramento – San Joaquin Delta (Delta) and Suisun Marsh in the lower Sacramento River Basin. Supplemental Documentation, Supplement IV. 2008 FWS BiOps Delta Smelt Crediting Decision Model.

²⁰ CDFW. March 24, 2021. Incidental Take Permit for 2081-2020-031-03 Lookout Slough tidal Habitat Restoration and Flood Improvement Project, Solano County.

flood and habitat benefits while minimizing overall conflicts with a variety of existing uses, ranging from agricultural operations to water intakes and diversions (as discussed in Section 3.3.2). In addition, during early design workshops for the Project, DWR considered whether maintaining Liberty Island Road to retain access to the LIER would be feasible. Unfortunately, maintaining public access via Liberty Island Road to the LIER would require Project design features that would reduce the Project's habitat and flood storage benefits (described further in Sections in 3.4.2.2 and 3.4.2.4) such that the Project would no longer qualify for its two funding sources.

Funding for habitat restoration is available for restoration projects designed in accordance with the Fish Restoration Program Agreement (FRPA) Implementation Strategy. Funding for the Project will be provided by DWR's State Water Project (SWP) operations and maintenance budget for perpetual operation and maintenance of the restoration project. The FRPA was established in 2010 between DWR and CDFW to address specific habitat restoration requirements of the U.S. Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS) Biological Opinions (BiOps) for the SWP and Central Valley Project (CVP) operations, and the habitat restoration requirements of the CDFW Longfin Smelt ITP for SWP Delta Operations. The Project's partial funding through the SWP budget will partially satisfy the 8,000-acre habitat restoration requirement established under the 2008 USFWS BiOp and carried forward in the 2019 USFWS BiOp. In the design phase, it was determined that using culverts in place of breaches would decrease the habitat value to be gained by the site's restoration and that culverts are inconsistent with restoration guidelines stated in the FRPA Implementation Strategy for reasons further detailed in Section 3.4.2.2.

The Project is also contracted and funded through Proposition 1 for its flood storage and conveyance benefits. Hydrologic and hydraulic modeling completed during the Project concept design phase showed that the Shag Slough Levee must be degraded and breached north of the Shag Slough Bridge in order to optimize flood benefits for use of Proposition 1 funding.²¹ These Project design features are incompatible with maintaining Liberty Island Road access to the LIER on top of Shag Slough Levee.

Acknowledging that complete avoidance of conflicts to existing recreational uses was not possible, DWR has implemented Project design features that would minimize impacts on the existing recreational use of the Project site, as outlined in Section 3.3.2 (and fully detailed in Attachment 4).

In addition to that described above, DWR has further considered (and modeled where appropriate) various public access design features to determine their feasibility for implementation at the Project site. Attachment 3, Section 5, provides a full discussion and analysis of public access proposals brought forth during the recreation stakeholder outreach that DWR has conducted since the DSC public hearings. The main design features considered are summarized below, followed by an analysis of these features' feasibility at the site according to

²¹ Environmental Science Associates. June 2019. Baseline Study Deliverable for Flood Conveyance Optimization. Lookout Slough Tidal Habitat Restoration and Flood Improvement Project.

the criteria defined by the Delta Plan (that being, whether potential public access opportunities that DWR did *not* include in Project design are "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors").

Categories of public access features and opportunities that have been considered for the Project include:

- <u>Opening Project Levees to Pedestrian and/or Vehicular Access.</u> This type of public access feature would open Duck Slough Setback Levee, Cache/Hass Slough Training Levee, Cross Levee, and/or the Shag Slough Levee segments (remaining after degrade) to recreational uses such as hiking, hunting, and birdwatching. Other potential components that fall within this category include opening these levees to vehicular access, and potentially adding parking areas and seasonally inundated roads across the Project site that provide access to Shag Slough Bridge or other portions of the Project site.
- Eliminating the Project's Four Northernmost Levee Breaches to Maintain Vehicular and Pedestrian Public Access on Liberty Island Road to the LIER. This type of public access feature involves keeping the Shag Slough Levee and Liberty Island Road intact to the Shag Slough Bridge by eliminating the four levee breaches north of the Bridge, and either maintaining the 1,500-foot degraded portion along this segment of Shag Slough Levee as a seasonally inundated road or eliminating the degrade as well.
- <u>The Use of Culverts or Bridges to Maintain Existing Vehicular and Pedestrian Public Access</u> on Liberty Island Road to the LIER. This type of public access feature would replace the four proposed northernmost levee breaches (up to 360 feet in length) on Shag Slough Levee with culverts or provide access across them by installing bridges, thus maintaining Liberty Island Road access to the LIER.

3.4.2.1 Economic Feasibility of Public Access Design Features

Economic Feasibility of Opening Project Levees to Pedestrian/Vehicular Access

DWR discussed the idea of opening Project levees to pedestrian access with CDFW. CDFW is responsible for approving mitigation credits for the habitat restoration of the Project and has a key role in ensuring that habitat restoration occurs according to the FRPA guidelines. In addition, CDFW, USFWS, and NMFS serve on the Fisheries Agency Strategy Team (FAST), a group responsible for approving the release of credits for tidal habitat restoration required under the BiOps for the SWP and CVP operations. As the purpose of the Project is to partially fulfill DWR's obligation to restore 8,000 acres of tidal habitat under these BiOps, CDFW plays a critical role in ensuring that the Project's design is consistent with the habitat goals and objectives tied to Project funding. In discussions with DWR, CDFW has indicated that allowing pedestrian access to the Duck Slough Setback Levee and the western portion of the Project site would be incompatible with the habitat goals and objectives of the Project, for the reasons outlined in Section 3.4.2.2 (Attachment 3A contains meeting notes detailing CDFW's concerns related to public access to on-site levees).

Given CDFW's stated concerns related to incompatibility with the habitat goals and objectives of the Project, opening on-site levees to pedestrian access would reduce Delta Smelt habitat credits from the FAST, thereby jeopardizing the SWP funding available for the Project. Therefore, allowing pedestrian access to the Project's levees would make the Project economically infeasible. As the habitat concerns related to pedestrian access on the levees would only be exacerbated by allowing vehicular public access or adding seasonal roadways, such design features would also jeopardize the Project's funding source and make it economically infeasible. The addition of seasonal roadways into the Project design anywhere on the site (not already encumbered with a conservation easement) would also create significant new cost considerations for road construction and ongoing operations and maintenance requirements. Additional discussion of the economic feasibility of this type of public access feature is included in Attachment 3, Sections 5.1.1, 5.1.3, 5.3.1, and 5.3.3.

Economic Feasibility of Eliminating the Four Northernmost Levee Breaches to Maintain Liberty Island Road

Removing the four breaches along the Shag Slough Levee north of Shag Slough Bridge from the Project design would reduce the amount and quality of tidal wetland habitat created by the Project for Delta Smelt and other special-status species, as outlined in Section 3.4.2.2. Due to the incompatibility of this type of design feature with the Project's habitat goals, funding for the Project would be jeopardized for the same reasons as discussed in the preceding paragraph.

In addition, if the Project is implemented with breaches only south of Shag Slough Bridge, the remnant Shag Slough Levee will no longer provide flood benefits and therefore will no longer be a part of the federal flood control project or be under the responsibility of Reclamation District (RD) 2098 (which is the local levee maintaining agency) for ongoing maintenance. However, if the northern breaches are eliminated to maintain vehicular access on Liberty Island Road, longterm maintenance and improvements to the levee would be necessary to ensure the levee is safe for public access. This will be especially costly given that the existing levee condition is deficient, as it contains multiple erosion sites and does not meet freeboard or levee geometry requirements (Attachment 3, Section 5.2.3). These maintenance costs would require extensive, reliable, long-term funding; however, if the levee segment is not part of the federal flood control project, it will be ineligible for State and federal funding programs. The Project as designed addresses this issue as the breached levee's gradual degradation is planned for and the public would not have access to the deficient portions of the levee. For these reasons, eliminating the northernmost levee breaches to maintain vehicular public access on Liberty Island Road to the LIER is economically infeasible. Additional discussion of the economic feasibility of this type of public access feature is included in Attachment 3, Sections 5.2.1, 5.2.2, and 5.2.3.

Economic Feasibility of Installing Culverts and Bridges to Maintain Liberty Island Road

Installing culverts in lieu of the breaches of the Shag Slough Levee north of Shag Slough Bridge, or installing bridges over these breaches, would present significant operations and maintenance concerns. With the installation of culverts or bridges, the Shag Slough Levee will no longer serve for flood protection and therefore will not be a part of the federal flood control project or under

RD 2098 responsibility. Therefore, for the same reasons described above related to eliminating the northern breaches, significant costs would be required to maintain these structures and levee sections, but they would be ineligible for federal or State funding. This is not a concern for the Project as designed because the breached levee's gradual degradation is planned for and maintenance funding is not needed since the public would not have access to the deficient portions of the levee. In addition, the installation of bridges would require deep foundations due to the condition of the existing levee, creating untenable increases in Project construction costs in the range of approximately \$6.5 million. Further, due to the incompatibility of this type of design feature with the Project's habitat goals (as outlined in Section 3.4.2.2), funding for the Project would be jeopardized for the same reasons as discussed above. For these reasons, the installation of culverts or bridges to maintain public access to Shag Slough Bridge is economically infeasible. Additional discussion of the economic feasibility of this type of public access feature is included in Attachment 3, Sections 5.4.1, 5.4.2, and 5.4.3.

3.4.2.2 Environmental Feasibility of Public Access Design Features Environmental Feasibility of Opening Project Levees to Pedestrian/Vehicular Access

Including public access (whether pedestrian or vehicular) on Project levees such as the Duck Slough Setback Levee, Cache/Hass Slough Training Levee, and Cross Levee would have direct impacts on special-status species habitat. The Project, as designed, provides aquatic and upland habitat for the giant garter snake (GGS), a federal and State-listed species that requires both aquatic and terrestrial habitat elements for survival. The Project would create foraging ponds specifically for GGS on the waterside of the Duck Slough Setback Levee, as well as GGS winter refugia habitat on an upland buffer between the Duck Slough Setback Levee and Duck Slough. The Duck Slough Setback Levee is therefore not only adjacent to this special-status species habitat but serves as a migratory corridor for GGS and as potential basking grounds for the species. Introducing pedestrian and/or vehicular public access could affect GGS through direct mortality from cars or bicyclists running over snakes, introduction of pets, introduction of exotic species, and through the transmission of novel pathogens, such as Snake Fungal Disease (SFD), which has the potential to be carried on clothes and shoes (Attachment 3B).

In addition, providing public access to internal Project levees runs the inadvertent (but foreseeable) risk of increasing public trespassing into protected intertidal habitat that would be easily accessible from the levee system, which could potentially directly and indirectly harm or harass associated aquatic special-status species or degrade suitable habitat for these species. The addition of seasonal roadways anywhere on the site into the Project design would only exacerbate these risks by replacing tidal wetland acreage in favor of roadway acreage, thereby decreasing suitable habitat for special-status species, introducing vehicular driving that could disturb wildlife species and therefore reduce habitat suitability beyond the footprint of the actual roadway, and increasing direct mortality of GGS and other wildlife. For these reasons, opening Project levees as recreational facilities to pedestrian or vehicular public access (and/or adding seasonal roadways for vehicular access) is environmentally infeasible. Additional discussion of the
environmental feasibility of this public access feature is included in Attachment 3, Sections 5.1.1, 5.1.3, and 5.3.1.

Environmental Feasibility of Eliminating the Four Northernmost Levee Breaches to Maintain Liberty Island Road

Removing the four northernmost breaches from the Project design to maintain Liberty Island Road to the LIER would decrease the amount and quality of tidal habitat created by the Project for Delta Smelt and other aquatic special-status species. Modeling performed by Environmental Science Associates for DWR (Attachment 3C) found that removing the four breaches north of Shag Slough Bridge from the Project would decrease tidal exchange into the northern portion of the Project site. This is true regardless of whether the northern portion of Shag Slough Levee is degraded (to create a seasonal roadway to Shag Slough Bridge) or not. This decreased tidal flow would increase tidal damping, which can cause low marsh vegetation to become stressed from waterlogging and decrease the tidal accessibility to fish species such as Delta Smelt. Increased tidal damping will also decrease tidal circulation and favor the establishment of invasive exotic species. Invasive plant species and harmful algae can establish in areas with reduced water velocities or areas without sufficient tidal exchange, which decreases habitat suitability for native and special-status fish populations. The greatest potential for tidal damping occurs at the northern and western edges of the Project site because of the greater distance from Shag Slough, and the Project as currently designed ensures that tidal damping is minimized in these areas. In addition, allowing for vehicular public access on the northern section of the Shag Slough Levee to Shag Slough Bridge could cause direct mortalities of GGS through vehicle strikes, as well as indirect forms of harm and harassment. For these reasons, eliminating the northern breaches in the current Project design to maintain vehicular public access on Liberty Island Road to the LIER is environmentally infeasible. Additional discussion of the environmental feasibility of this type of public access feature is included in Attachment 3, Section 5.2.1.

Environmental Feasibility of Installing Culverts and Bridges to Maintain Liberty Island Road

Installation of culverts in lieu of breaching the Shag Slough Levee north of the Shag Slough Bridge would decrease habitat suitability for native, special-status fish and lead to increased predation of special-status fish that the Project is designed to help. Based on scientific literature discussed in greater detail in Attachment 3, Section 5.4.1, culverts are known to restrict fish movement by altering the physical characteristics of water courses, altering light conditions, attracting non-native fish predators, and increasing water velocities at the culvert location. Studies have shown that culverts create the highest water velocities when compared to other types of water-road crossings, which exacerbate predation on native fish by non-native fish. Studies have also shown that overall fish movement through culverts was an order of magnitude lower compared to other types of water-road crossings.

In addition, the purpose of installing culverts in lieu of levee breaches would be to maintain vehicular access along Liberty Island Road to Shag Slough Bridge, which provides pedestrian access to the LIER. As described in previous sections, allowing for vehicular public access on the northern section of Shag Slough Levee to Shag Slough Bridge could cause direct mortalities of

GGS through vehicle strikes, as well as indirect forms of harm and harassment. For these reasons, the installation of culverts in place of breaches along the northern section of the Shag Slough Levee to allow continued vehicular access is environmentally infeasible.

Depending on site constraints, bridges can be installed that have minimal effects on habitat. However, bridges may require decreasing the dimensions of the breach openings (diminishing flood storage and conveyance benefits) and may require deep foundations, dramatically increasing construction impacts and costs. These feasibility issues related to construction costs and flood benefits are discussed further in Sections 3.4.2.1 and 3.4.2.4, respectively. Additional discussion of the environmental feasibility of this type of public access feature is included in Attachment 3, Sections 5.4.1 and 5.4.3.

3.4.2.3 Legal Feasibility of Public Access Design Features

Legal Feasibility of Opening Project Levees to Pedestrian/Vehicular Access

During operations and maintenance patrolling and inspections in the Delta, it has been noted that members of the public vandalize levees by carving into the levee prism to make fishing platforms by the water, creating fire rings, or creating steps into the levee slope. All of these activities jeopardize levee integrity, and therefore flood protection, and are illegal under U.S. Army Corps of Engineers (USACE) regulation 33 Code of Federal Regulations (CFR) Section 208.10, which guides the maintenance and operation of local flood protection structures and facilities. Section 4 of the regulation states that "No encroachment or trespass which will adversely affect the efficient operation or maintenance of the project works shall be permitted upon the rights-of-way for the protective facilities." Allowing public access to Project levees would increase the incidence of illegal activities by the public, which in turn affects the public safety function of the levee's integrity.

In addition, the incorporation of any seasonally inundated access roads that would traverse across the Project site south of the east-west segment of Lookout Slough would be legally infeasible due to existing WRP easement restrictions. Construction of any seasonal access road across the central and southern portions of the Project site would require crossing through the Liberty Farms property; however, three perpetual WRP easements currently exist over the vast majority of the Liberty Farms property (approximately 1,654 acres out of the 1,711-acre property). The Warranty Easement Deeds for the existing WRP easements outline prohibited uses, which include prohibitions of motorized land vehicles in tidal habitat areas and any alteration of wildlife habitat or natural features that destroys vegetative cover (Attachment 3, Section 5.3.1).

Finally, in consideration of the restrictive conservation easement over the intertidal habitat that will be restored for Delta Smelt for the Project, public trespassing will be prohibited and enforced in these areas, and increasing the proximity and frequency of formal public uses to this habitat presents legal conflicts that make pedestrian access throughout the Project site infeasible.

For these reasons, opening Project levees to pedestrian or vehicular public access and/or adding a seasonal roadway across the Project site would be legally infeasible. Additional discussion of the

legal feasibility of this public access feature is included in Attachment 3, Sections 5.1.1, 5.1.2, and 5.3.1.

3.4.2.4 Social Feasibility of Public Access Design Features Social Feasibility of Opening Project Levees to Pedestrian/Vehicular Access

Allowing pedestrian or vehicular public access on Project levees (or adding seasonally inundated roads to the Project design) would not affect the Project's flood storage and conveyance benefits within the Yolo Bypass; however, it would likely increase public vandalism that has potential to compromise levee integrity within the Project site (as described in Section 3.4.2.3). In addition, there are very real public safety issues that arise when levee flood infrastructure is used for public recreational access; for instance, pedestrian or vehicular traffic on the levees will lead to erosion that could compromise the integrity of the levees.²² There are also potential impacts and delays to maintenance activities required for flood control levees when the public has access, such as mowing, grazing, and erosion control activities that present safety issues when the public is present and create detour challenges to retain access. During a high-water event, the presence of the public can also inhibit patrolling and emergency response. The addition of seasonal roadways into Project design anywhere on the site would exacerbate public safety risks. As the Project will be part of the Yolo Bypass, allowing vehicles and/or pedestrians along a seasonal road within the floodway would increase the potential for members of the public to be stranded or exposed to increased risks when flooding occurs. For these reasons, opening Project levees to pedestrian and/or vehicular public access (or adding seasonal roadways to the Project design) is infeasible due to concerns for public safety. Additional discussion of the social feasibility of this public access feature is included in Attachment 3, Sections 5.1.2, 5.1.3, 5.3.1, and 5.3.2.

Social Feasibility of Eliminating the Four Northernmost Levee Breaches to Maintain Liberty Island Road

Eliminating the four northernmost Shag Slough Levee breaches to maintain vehicular access on Liberty Island Road to the LIER would significantly reduce the flood storage and conveyance benefits of the Project. Under the Project design, for example, the water surface elevation (WSE) for a 100-year flood event at the northern boundary of the Project site in the Yolo Bypass is estimated to be reduced by 0.52 foot compared with current baseline conditions at this location (see Attachment 3C for modeling results). If all four breaches north of the Shag Slough Bridge are eliminated, the estimated change in WSE for a 100-year flood event at the same location is a reduction of only 0.07 foot from baseline conditions, providing significantly less flood stage reduction than that provided by the Project. Similar situations would occur at the Solano and Yolo County line and at County Road 155, both in the Yolo Bypass, where elimination of the four northern breaches in the Project design conditions. If the section of Shag Slough Levee north of Shag Slough Bridge were degraded (allowing its use as a seasonal access road to the Bridge) rather than breached, the estimated change in WSE at the northern Project boundary for a 100-year flood event from baseline conditions is a reduction of 0.41 foot (versus 0.52 foot under the

²² Pesavento D, P.E., California Department of Water Resources, personal communication, December 8, 2021. Data referenced publicly available at: https://cdec.water.ca.gov/fsir.html.

Project as designed). While the difference in flood stage reduction in this case is less dramatic than eliminating the breaches without degrading Shag Slough Levee, it still reduces the functionality of the Project to ameliorate flood flows in the Yolo Bypass. In addition, this scenario presents the same public safety issues related to the use of seasonal roadways that were described above; allowing vehicles and/or pedestrians along a seasonal road would increase the potential for members of the public to be stranded or exposed to increased risks (including injury or death) during high-water events. For these reasons, eliminating the northernmost levee breaches would be infeasible due to social concerns for public safety. Additional discussion of the social feasibility of this public access feature is included in Attachment 3, Section 5.2.2.

Social Feasibility of Installing Culverts and Bridges to Maintain Liberty Island Road

During the Project's design phase, DWR determined that incorporating culverts across the proposed breaches of the Shag Slough Levee would not effectively route Yolo Bypass flood waters. Culverts are not manufactured large enough to allow for sufficient passage of the volume of water required to meet flood storage and conveyance needs in the lower Yolo Bypass. In operation, culverts would become clogged with debris, which not only presents flood conveyance limitations, but also adds to safety issues for boaters and kayakers.

Bridge crossings could be designed to span the levee breaches without significantly reducing the flood benefits relative to the Project performance baseline. However, due to conditions at the Shag Slough Levee, installing bridges may require reducing the dimensions of the breach openings in order to construct the bridges safely, which would reduce the volume of flood waters conveyed by the Project. For these reasons, installation of culverts in lieu of levee breaches or bridges over the breaches would not provide the type of reduction in flood stage that is needed in the lower Yolo Bypass and would therefore be infeasible due to social concerns for public safety. Additional discussion of the social feasibility of this public access feature is included in Attachment 3, Section 5.4.2.

3.4.2.5 Technological Feasibility of Public Access Design Features

Technological Feasibility of Installing Culverts and Bridges to Maintain Liberty Island Road

As discussed above, it is not technologically feasible to create culverts large enough to provide capacity for the necessary volume of flood waters required to meet flood storage and conveyance needs in the lower Yolo Bypass.

The existing Shag Slough Levee segment that includes Liberty Island Road to the Shag Slough Bridge has been reconstructed and repaired numerous times since its original construction. As discussed in greater detail in Attachment 3, Section 5.2.3, multiple erosion sites have been documented within the Project limits of the Shag Slough Levee, and this levee segment does not meet freeboard or levee geometry requirements. In addition, stability concerns and active erosion during high-water events has become evident on the eastern slope of the Shag Slough Levee. Therefore, the existing Shag Slough Levee is not suitable for structural features such as anchoring a slab concrete bridge, nor does it have the integrity to support such structures. Soil conditions along Shag Slough Levee would provide challenges to building bridges over the four northern breaches.²³

For these reasons, the installation of culverts in lieu of the northernmost Project breaches or using bridges to maintain access across the breaches is technologically infeasible. Additional discussion of the technological feasibility of this public access feature is included in Attachment 3, Section 5.4.3.

3.4.2.6 Schedule/Timing Feasibility of Public Access Design Features

All of the changes to Project design discussed above related to public access opportunities not previously considered would require additional environmental review pursuant to CEQA and amendments to Project permits, resulting in unacceptable delays and increased costs that are not related to the Project's overall purpose and goals and would prompt locating and securing additional funding sources, if available, further delaying the Project. Depending on the nature of the public access feature, it is anticipated that the additional CEQA review and permitting requirements would delay the Project by a minimum of one to three years. Given the precarious status of Delta Smelt, any delays in Project implementation could result in this species becoming extinct in the wild before this Project can provide any benefits to them. Thus, any delays are unreasonable, and Project design changes to create additional public access beyond that proposed by DWR (summarized in Section 3.3.2 and outlined in Attachment 4) are infeasible based on schedule and timing constraints.

²³ Reporter's Transcript of Proceedings for the Delta Stewardship Council Public Hearing, Appeals of Certification of Consistency Submitted by California Department of Water Resources Regarding Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, Certification Number C20215, p. 40. May 21, 2021.

B-5 Letter 3: Liberty Island Access, Attachment 2

ATTACHMENT 2 – TECHNICAL ANALYSIS – CONSISTENCY WITH POLICY G P1(b)(3): BEST AVAILABLE SCIENCE METHODS USED TO ESTIMATE RECREATIONAL USE

LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT

Solano County, California

Prepared on Behalf Of:

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

Prepared For:

EIP III Credit Co., LLC 2330 Marinship Way, Suite 120 Sausalito, CA 94965

Contact: Stephanie Freed stephanie@ecosystempartners.com

Prepared By:

WRA, Inc. 2169-G East Francisco Blvd. San Rafael, CA 94901

Contact: John Baas Baas@wra-ca.com

Date: December 2021







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1. Introduction

1.1 Summary of DSC Finding on Consistency with Policy G P1(b)(3)

The California Department of Water Resources (DWR) filed a *Certification of Consistency for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Certification) to the Delta Stewardship Council (DSC) on February 22, 2021. The DSC released its *Determination Regarding Appeals of the Certification of Consistency by the California Department of Water Resources for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Determination) on July 16, 2021. In the Determination, DSC found that there was not sufficient evidence in the record to support DWR's finding that the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project) was consistent with Delta Plan Policy G P1(b)(3), Best Available Science (BAS), with regard to methods to estimate recreational use as it relates to the Best Available Science criterion of Inclusiveness.

Policy G P1(b)(3) requires that all covered actions, as relevant to the purpose and nature of a project, must document the use of BAS. BAS, as defined in the Delta Plan, is the best scientific information and data available for informing management and policy decisions [Cal. Code Regs, tit. 23, § 5001, subd. (f).]. BAS shall be consistent with the guidelines and criteria found in California Code of Regulations, Title 23, Appendix 1A (Appendix 1A, Best Available Science, Delta Plan), which lists six criteria for BAS:

- 1. Relevance
- 2. Inclusiveness
- 3. Objectivity
- 4. Transparency and Openness
- 5. Timeliness
- 6. Peer Review

In the Determination, DSC found that the Certification was supported by substantial evidence in the record, and the Project is consistent with G P1(b)(3) with respect to methods used to estimate recreational use based on five of the six criteria (Relevance, Objectivity, Transparency, Timeliness, and Peer Review). DSC found that the Certification was not supported by substantial evidence in the record based on BAS criterion 2, Inclusiveness, specifically related to the methods used to estimate recreation use.

1.2 Summary of Attachment

This document (Attachment 2 to the Re-Certification) is part of a package prepared by DWR to re-submit a Certification of Consistency (Re-Certification) to the DSC for the Project. This document examines the work done by DWR to date, considers whether the recommendation of the DSC to include additional census tract data meets the requirements of the Inclusiveness criterion, and describes additional recreation use analyses done since the Determination was released. These additional analyses include a review of DWR's BAS approach by Subject Matter Experts (SMEs), an additional literature study that examines environmental justice issues with respect to Delta lands, and listening sessions that DWR conducted with recreation stakeholders to better understand their specific concerns. The additional analyses also include a recent on-site study of recreational users of the Study Area, which includes Liberty Island Road where it sits atop the Shag Slough Levee, Shag Slough Bridge, and the Liberty Island Ecological Reserve (LIER). The on-site study included three components: vehicle counts via aerial photography analysis, vehicle counts via motion-activated cameras, and in-person visitor surveys. Finally, this document concludes that the augmented record supports DWR's previous estimates of recreation use in the vicinity of the Project site, as described in the original Certification.

1.3 Evaluation of BAS Criteria for Additional Recreation Use Analyses

This Re-Certification focuses on the BAS criterion of Inclusiveness (Section 2 below) because this was the only BAS criterion remanded by the DSC in the Determination, as summarized in Section 1.1. However, because new recreation use analyses were conducted since the Determination, the following section evaluates the recreation use data and collection methodology against the remaining five BAS criteria specified in the Delta Plan Appendix 1A. For each of these five BAS criteria, an evaluation is presented below that demonstrates how the additional recreation use data (collected in 2021 after the release of the Determination) meet the BAS criteria.

Relevance: "The quality and relevance of the data and information used shall be clearly addressed."

Fall 2021 Recreation Study: The data reported from the Fall 2021 study results are directly relevant since the focus was on counting and interviewing visitors recreating on the Shag Slough Levee, Shag Slough Bridge, and the LIER. The data quality from this study is high because WRA, Inc. (WRA) followed best practices for survey research, including vetting, peer review, and pretesting. For the visitor surveys, the team engaged in multiple review/revision cycles and had three Ph.D.-level scientists review and pretest the survey. The entire team that collected data viewed a project orientation video and participated in on-site training. The quality of the motion-activated camera data is high because several different people reviewed the same sources and reported the same use levels. Before transmitting vehicle data to WRA, an on-site person from Hanford Construction verified that the data had no duplicates, and removed vehicles clearly

associated with work-related activity (e.g., Pacific Gas & Electric Company [PG&E] vehicles, WRA vehicles).

Objectivity: "Data collection and analyses considered shall meet the standards of the scientific method and be void of nonscientific influences and considerations."

Fall 2021 Recreation Study: Data collected during Fall 2021 meet the standards of the scientific method as applicable to conducting outdoor recreation research. The American Association for Public Opinion Research has 12 principles that reflect best practices when conducting survey research.¹ Table 1 demonstrates how the Fall 2021 recreation survey addresses these principles.

Best Practice/Principle	Response
Have specific goals	The Fall recreation study had the goal of characterizing existing recreation use at the LIER and surrounding areas.
Consider alternative data beyond a survey	In 2019, DWR evaluated six other sources of relevant information to characterize existing recreation use at the LIER and surrounding areas.
Select samples that well represent the population to be studied	Samples of anglers were surveyed during weekdays, weekend days, and a holiday. Samples of waterfowl hunters were surveyed on opening day of hunting season, and one week later.
Use designs that balance costs with errors	Survey teams were instructed to contact and attempt to survey everyone they encountered on sampling days.
Take great care in matching question format and wording to the concepts being measured and the population being studied	Questions were written to be easy to understand and were vetted with data collection staff and three Ph.Dlevel staff with experience with survey research. Questions were pretested with several visitors to the Study Area prior to beginning data collection. Visitors contacted by data collection staff were given the option to complete the survey in English or Spanish.
Pretest questionnaires and procedures	See previous response.
Train interviewers carefully on interviewing techniques and the subject matter of the survey	All interviewers participated in a project orientation and practiced interviewing techniques with each other before beginning the survey pretesting with visitors.
Check quality at each stage	A data manager checked all survey responses for completeness an d legibility before entering and analyzing survey data. No surveys were eliminated due to data quality issues.
Maximize cooperation or response rates within the limits of ethical treatment of human subjects	Data collection staff were instructed to contact every visitor they encountered during the sampling days. Visitors were not coerced into completing surveys. Survey completion required about five minutes per visitor.
Use appropriate statistical an alytic and reporting techniques	Since the goal of the study was to describe, not evaluate, existing recreation use, statistical tests were not conducted. Responses to all questions are reported, along with the number of visitors who responded to each question.
Carefully develop and fulfill pledges of confidentiality given to respondents	No survey respondents' names or addresses were collected.
Disclose all methods of the survey to allow for evaluation and replication	A methods discussion is included in Section 3.4 of this document.

TABLE 1 BEST PRACTICES FOR SURVEY RESEARCH

¹ American Association for Public Opinion Research. 2021. Best Practices for Survey Research. https://www.aapor.org/Standards-Ethics/Best-Practices.aspx.

Transparency and Openness: "The sources and methods used for analyzing the science (including scientific and engineering models) shall be clearly identified."

Fall 2021 Recreation Study. Attachment 2 and its supporting documentation will be publicly posted on the DWR and DSC websites and available for review during a 30-day public comment period established by the DSC. As discussed in Section 3.3 below, DWR conducted listening sessions with California Department of Fish and Wildlife (CDFW), Delta Protection Commission (DPC), Solano County (County), and Liberty Island Access (LIA). As part of these listening sessions, LIA and DPC advised DWR to collect recreation data, although specific study methods were not offered.

Timeliness: "Timeliness has two main elements: (1) data collection shall occur in a manner sufficient for adequate analyses before a management decision is needed, and (2) scientific information used shall be applicable to current situations. Timeliness also means that results from scientific studies and monitoring may be brought forward before the study is complete to address management needs. In these instances, it is necessary that the uncertainties, limitations, and risks associated with preliminary results are clearly documented."

Fall 2021 Recreation Study: Data collected during the Fall 2021 study were analyzed immediately upon completion of the September and October sampling periods (before the information was used for determining Delta Plan consistency for the remanded issues). Preliminary results were reported to DWR and DSC in a meeting on November 18, 2021.

Peer Review: "The quality of the science used will be measured by the extent and quality of the review process. Independent external scientific review of the science is most important because it ensures scientific objectivity and validity. The following criteria represent a desirable peer review process."

"Coordination of Peer Review. "Independent peer review shall be coordinated by entities and/or individuals that (1) are not a member of the independent external review team/panel and (2) have had no direct involvement in the particular actions under review."

Fall 2021 Recreation Study: DWR has engaged Dr. William Spain, a recognized recreation SME, to peer review Attachment 2 with an emphasis on visitor count and survey methods. Dr. Spain has not worked on this study, and is not employed by DWR, its consultants, or any of the other agencies with permitting authority for this Project. In addition, Dr. Spain and two other SMEs were interviewed regarding the use of census tract data, as described further in Section 3.1.

Independent External Reviewers. "A qualified independent external reviewer embodies the following qualities: (1) has no conflict of interest with the outcome of the decision being made, (2) can perform the review free of persuasion by others, (3) has demonstrable competence in the subject as evidenced by formal training or experience, (4) is willing to utilize his or her scientific expertise to reach objective conclusions that may be incongruent with his or her personal biases, and (5) is willing to identify the costs and benefits of ecological and social alternative decisions."

Dr. Spain has no conflict of interest with the outcome of the decision to be made, and has the requisite qualifications to conduct a scientific, peer review of Attachment 2 (see Section 3.1 for affiliation and qualifications of Dr. Spain and the other two SMEs).

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2. Response to DSC's Findings Regarding Inclusiveness

2.1 Inclusiveness Definition

As stated in Appendix 1A of the Delta Plan, Inclusiveness means that, "[s]cientific information used shall incorporate a thorough review of relevant information and analyses across relevant disciplines." The following section summarizes the ways in which the previous methods used to estimate recreation use in the original Certification met this definition and describes how the use of additional census data (as suggested by the Determination) does not meet this definition.

2.2 Discussion of Inclusiveness of Census Data for Estimating Recreation Use

In the Determination, DSC noted that DWR used a single census tract to estimate anglers who fish from the bank in the LIER and stated that DWR did not explain the exclusion of additional census tracts covered by the Project site (or within a 21- to 60-minute travel distance of the site, which was used in another aspect of DWR's analysis to identify other recreational sites in the region), even though this information was readily available. Based on a review of recreation research literature and interviews with SMEs, using population data from multiple census tracts would have drastically overestimated land-based angling, as discussed more below.

Estimating total recreation use for a single recreation site or area using only population data (e.g., census tract data) is recognized as inappropriate by recreation resource SMEs (see Section 3.1 and Attachment 2B). It is well established in the recreation resource literature that population size and proximity to recreation areas are key drivers of recreation use.^{2,3} However, simply estimating recreation use from nearby population size, without consideration of other highly relevant factors, tends to result in over-estimates of recreation use.⁴ Population data are most useful for long-term, "big picture" estimates of recreation use; for example, simple population data can be used to provide estimates of recreation use during initial scoping for a project or program that involves multiple recreation sites representative of a state or region. However, a more complete model of

² Loomis JB, and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

³ Haas GE, and Wells M. 2007. Estimating Future Recreation Demand: A Decision Guide for the Practitioner. U.S. Department of Interior, Bureau of Reclamation, Office of Program and Policy Services, Denver Federal Center, Denver, Colorado. https://fdocuments.in/document/estimating-future-recreation-demand-a-decision-guide-for-the-2016-08-03-demand.html.

⁴ Loomis JB and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

use estimation for large recreation areas, or areas that include multiple recreation areas, can include the following variables that may influence the degree of use:⁵

- a. Population size and proximity to the subject site.
- b. Travel time to the subject site.
- c. Age of the population in the area from which recreation users reside.
- d. Income of the population in the area from which recreation users reside.
- e. Availability and location of substitute recreation sites.
- f. Congestion at the subject recreation site.

Based on the recreation resource literature and the model described above.⁶ the following can be implied: Travel time to a site can be a proxy for cost; thus, most recreation use at an "ordinary" recreation site (i.e., a recreation site like the Project site, that is not nationally or regionally recognized or documented to attract visitors from distant locations) originates locally, as discussed more in the next paragraph. For "attraction" sites (e.g., a site like Yosemite National Park), this relationship is not true, as visitors are willing to invest more time and money to visit attraction sites. Age and recreation are inversely related, as younger people tend to show greater participation in outdoor recreation activities than older people. Income has the reverse effect individuals with higher incomes show higher levels of participation in outdoor recreation activities when compared to other members of the population, all other factors being equal. The availability and location of substitute recreation sites tends to decrease visitation levels at a given site, as recreational use is dispersed. This means that, to the extent a recreation "consumer" has other choices for engaging in their desired activity, demand for a given subject recreation site is reduced. Congestion, such as the inability to find a parking spot or long wait times for boat launching, also has an offsetting effect that is independent of population, age, and income factors. When all of these factors are considered, the level of recreation use at "ordinary" recreations sites, such as the Project site, is reduced by the effects of age, income, and availability of similar recreation sites compared to a model that only uses census tract information; thus, populationbased estimates would likely over-estimate use at "ordinary" sites.

The idea that most recreation use at "ordinary" recreation sites originates locally is supported in the recreation resource literature. For example, California Department of Parks and Recreation (CDPR) conducts a statewide survey of outdoor recreation participation throughout the state approximately every five years. The public opinions and attitudes toward outdoor recreation in the CDPR survey found that most respondents traveled locally, between 21 and 60 minutes, to reach the places they recreated most frequently. In their review of outdoor recreation research literature, Loomis and Walsh similarly found that 66 percent of recreation use at "ordinary" sites

⁵ Loomis JB, and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

⁶ Loomis JB, and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

originates within 25 miles.⁷ Based on this recreation research literature,^{8,9,10} DWR made an informed assumption in previous recreation analyses that most visitors who fish from the bank within the Project area would be considered local. This informed decision is supported by the 2021 on-site recreation use study, which included visitor surveys and vehicle counts (as discussed in Section 3.4).

When the Draft Environmental Impact Report (EIR) was being prepared in 2019, a combination of census tract data (to represent the local population), a survey of Central Valley anglers, and a site analysis of the LIER was used to estimate the number of shoreline anglers. The bank fishing estimation method used the population of Census Tract 2534.03, as the larger of the two census tracts on the Project site, and then applied recently surveyed Delta fishing rates from 2019¹¹ to estimate that there are approximately 200 local residents who partake in fishing. Based on recent survey results of Central Valley anglers (from 2018),¹² it was estimated that approximately 40 percent of those 200 anglers (80 individuals) fish from the bank. This methodology used population data in the form of a single local census tract to inform a multi-pronged approach to estimate bank fishing use on the site. To confirm estimates of shoreline angling in the LIER, DWR collected visitor data in September and October, the results of which are described further in Section 4.3.

Although the local population may represent a significant portion of total potential visitors to a particular site, the actual level of site visits is constrained by site-specific factors, such as parking and crowding. In the case of the LIER, the availability of areas to hunt and fish safely is another important spatial constraint that limits use of the area. Unlike estimating demand for the use of a trail for hiking, fishing and hunting have specific spatial constraints associated with determining projected use and demand. For instance, hunting near another recreationist can create obvious safety hazards, as limited space can affect an angler's ability to safely cast a line and/or avoid getting their line entangled with another angler's fishing line. Therefore, the amount of shoreline available for bank fishing on the LIER was evaluated as a potential site constraint to shoreline fishing use. In its appeal letter to DSC, the LIA Appellant lists the total length of trail along the western side of the LIER as 1.6 miles, along with 18 access points. WRA reviewed the LIA Appellant's information that depicts these areas and reviewed the conditions on the ground in Summer 2021. The informal angler trail that proceeds in a southerly direction from the Shag Slough Bridge is overgrown and becomes increasingly difficult to navigate after walking about 0.75 mile, and even this length of shoreline area is not free from vegetation and thus not

⁷ Loomis J., and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

⁸ Loomis JB, and Walsh RG. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. 2nd Edition. Venture Publishing: State College, PA.

⁹ English DBK, White EM, Bowker JM, and Winter SA. 2020. A review of the Forest Service's National Visitor Use Monitoring (NVUM) Program. Agricultural and Resource Economics Review. 49(1): 64-90. https://doi.org/10.1017/age.2019.27.

¹⁰ California State Parks. 2014. Survey on Public Opinions and Attitudes towards Outdoor Recreation in California. https://www.parks.ca.gov/pages/795/files/2012%20spoa.pdf.

¹¹ Mickel A, Taylor S, and Shaw G. May 2019. Recreation & Tourism in the Delta, n.d., 81.

¹² Thomson C, and Kosaka R. 2018. Results of the 2015 Economic Survey of Central Valley Anglers. NOAA Technical Memorandum NMFS.

completely available for fishing. Therefore, LIA's claim could not be reproduced or confirmed. Based on WRA's analysis, most representative fishing areas identified in the LIER could reasonably accommodate two anglers, and two locations were identified that could possibly accommodate two to five anglers (Attachment 2A).

In addition, a review of other possible substitute recreation sites (variable "e" in the model described above) for the LIER in the region included: Colusa-Sacramento River State Recreation Area (7,006 annual visits), Bethany Reservoir (2,263 annual visits), and Delta Meadows (6,547 annual visits).¹³ These sites offer comparable facilities and the ability to participate in the same (or similar) activities and are therefore assumed to have similar levels of recreation use as the LIER. The relatively low visitation numbers at comparable sites in the region implies that the LIER is a similarly low recreation use area.

The interviews with recreation resource SMEs and literature review discussed in this section illustrate that estimating recreation use at the Project site by applying population data for all census tracts within a 60-minute driving radius would likely overestimate recreation use at the Project site and would therefore *not* constitute Best Available Science. Further, additional on-site visitor surveys conducted since the Determination support DWR's original evaluation of recreation use on the site. Results of the on-site visitor surveys are discussed in detail in Section 4.3.

¹³ California State Parks Statistical Report, FY2016/2017, https://www.parks.ca.gov/?page_id=23308.

3. ADDITIONAL RECREATIONAL USE ANALYSES

The following sections of this document describe the additional recreation use analyses that DWR conducted following the release of the Determination. The sections also address DWR's ability to meet the Inclusiveness criterion in these subsequent data collection and analysis efforts.

3.1 Subject Matter Expert Review

As noted in Appendix 1A of the Delta Plan, scientific expert opinion is considered one of several sources of information that may be used in adhering to BAS. With this in mind, three outdoor recreation SMEs were consulted to offer their scientific and expert opinions to determine whether census tract data could and/or should be applied to estimate recreation use levels for the Study Area. Each SME was briefed about the Project and DSC's Final Consistency Determination with the Delta Plan, and then asked how to respond to the remand decision. SME interview notes are included in Attachment 2B, and summaries of the SMEs' responses are presented below.

Dr. Glenn Haas (former Department Head, Recreation Resources and Landscape Architecture Department, Colorado State University, and independent recreation planning consultant). In response to the question about how to respond to the remand decision, Dr. Haas suggested that without visitor use information, one must rely on expert opinion (professional judgment), reasonable assumptions, and a logical thought process. Dr. Haas recommended starting at the lowest recreation use level possible and then aggregating for the year, which involves assessing daily and weekend use levels. For example, Dr. Haas recommends determining the use levels at boat launch parking lot areas on weekends during hunting season. If possible, Dr. Haas also suggests consulting a local game warden for professional judgement on the number of daily cars. This should also be done for weekdays, outside of hunting and fishing season, etc. DWR should use whatever data they have to estimate use. However, population (census tract) data should not be used as they are only good for future projections. Dr. Haas also suggested to estimate use levels with a numeric range, not a specific number, as it is too hard to defend and argue a specific visitor use number. The goal is to be reasonable versus accurate because achieving the absolute true answer is not possible. Dr. Haas recommends estimating a range of use for in-season (fishing and hunting) and out-of-season periods, and for weekends and weekdays. He suggests this should be done for each key access point (launch, parking) affected by the proposed Project.

Dr. Doug Whittaker (Confluence Research and Consulting, providing visitor use and facility capacity estimates to federal land management and water resource agencies throughout the United States). Dr. Whittaker indicates that use of census tract data to estimate recreation use for the Lookout Slough Project is not recommended. He reports that there is a weak correlation between population size and recreation use levels at specific sites. Other factors that are much more

influential than population are large-scale societal trends in response to disruptive events, such as the pandemic. In the absence of good visitor uses data, one could estimate use using aerial photographs, and one should estimate a range of use, **not** a single number. Dr. Whittaker indicates that trying to determine a single number for the Study Area is not advisable, and that if DSC or DWR insists on estimating use, then a range of use should be established versus a single number.

Dr. Bill Spain (Instructor, Department of Recreation and Public Health, San Jose State University). Dr. Spain suggested that one would only use population/census tract data if one is going to construct a model for which information about visitor choices to other recreation areas in the travel time radius of the Study Area is needed. Dr. Spain strongly recommended obtaining some visitor counts on-site to characterize existing visitor use. When asked about mobile application data (location-based data stored in cell phones), Dr. Spain cautioned against using this type of information unless DWR can validate with other use estimation methods. Dr. Spain's comment regarding using mobile application data is consistent with a review of mobile devices to estimate visitor use prepared by Dr. Megan Lawson¹⁴ of Headwater Economics. She concluded that other forms of validation of visitor use estimates, such as having traffic count data, are needed to effectively use mobile application data to estimate visitor use levels.

Based on the discussions with the SMEs, estimating total recreation use for a single recreation site or area using only population data (census tract or other sources of population data) is inappropriate.

3.2 Environmental Justice Study

During the July 2021 DSC hearing on the proposed Project's Consistency Determination, the Appellant for LIA indicated that the proposed Project would create environmental justice impacts for those individuals who do not have boats, and that the only reasonable access for these individuals to the LIER was via the Shag Slough Bridge. DSC member Madueno voiced a similar concern about economically disadvantaged individuals that do not have the ability to purchase motorized boats. To expand the reach of Inclusiveness, DWR herein incorporates information from a recent environmental justice study for the Delta region that was conducted for DWR's Delta Conveyance Project.¹⁵ In May 2021, DWR completed a report based on a robust, in-depth community survey of Disadvantaged and Severely Disadvantaged communities (DAC and SDAC) who lived or work in the legal Delta as well as adjacent areas. This study confirms that fishing in the Delta is a way of life for these communities. About 90 percent of the fishing respondents surveyed indicated that they eat fish from the Delta four or more times per week. Survey results from the question "What places matter to you?" showed that only a very small number of digital markers (Figure 1) were placed in the vicinity of the Lookout Slough Project, indicating that DAC/SDAC interest in the Delta is diffused and not concentrated in the Project area. As described below, the additional on-site recreation use study also shows that the majority

¹⁴ Lawson M. 2021. Counting Recreation using Novel Data Sources. Headwater Economics, Bozeman, Montana. https://headwaterseconomics.org/outdoor-recreation/counting-outdoor-recreation/.

¹⁵ DWR. 2021. Survey Findings: Your Delta Your Voice Environmental Justice Community Survey. May 2021.



Note: Survey participants had the option to indicate whether a cultural or historic resource map marker should be treated as confidential. These markers have been removed from this map. This figure originally appeared as Map 3 in the report, "Your Delta Your Voice: Environmental Justice Community Survey," conducted for DWR's Delta Conveyance Project.

Ecosystem Investment

Prepared by:

ENVIRONMENTAL CONSULTANTS

Partners

Map Prepared Date: 9/23/2021 Map Prepared By: njander Base Source: Wood Rogers

Base Date: 10/24/17

ata Source(s): WR/

Figure 1. Special Places identified in the Delta Environmental Justice Survey

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project

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of fishing in the Study Area takes place along the western bank of Shag Slough, and not in the LIER (which speaks to the concern from LIA and DSC member Madueno that removing pedestrian access to the LIER via Shag Slough Bridge would have major impacts on anglers visiting the site for subsistence).

3.3 Listening Sessions

DWR and Ecosystem Investment Partners (EIP) conducted listening sessions and focused interviews in August and September 2021 with the Appellants of the Project's Certification and other relevant recreation stakeholders to better understand their concerns about the proposed Project and how it might affect recreation use of Liberty Island Road, the Shag Slough Bridge, and the LIER. Listening sessions were conducted with CDFW, LIA, DPC, and the County. A full summary of meeting notes may be found in Attachment 3A, and key points made during those meetings are summarized here.

- **CDFW** indicated that allowing public access (or in this case, not restricting public access) to the levee tops is a major issue for protected species, especially giant garter snake. CDFW did not support any public access on the Duck Slough Setback Levee or on the Cache/Hass training levee. They would prefer to see public use focused where it already exists (on the Shag Slough side of the Project site closer to the LIER). CDFW brainstormed some ideas related to public access, which were presented at the meeting and are included in Attachment 3A.
- **DPC** believes that there are not enough data for the region and that not enough surveys were done to truly know the level of recreation use in the Project vicinity. They suggested that DWR and EIP clarify that the public can use the boat ramp and that the proposed Project incorporates a parking area. To maintain or mitigate for loss of recreational use, DPC suggested opening the Duck Slough Setback Levee to pedestrian access (e.g., for birdwatching, fishing, etc.) and retaining the Shag Slough Levee all the way to the Shag Slough Bridge.
- Solano County expressed a desire to balance different needs, including avoiding and minimizing depreciative behavior. The County knows that neighboring agricultural landowners do not want to be affected by trespassing, dumping, and vehicular traffic on levees but also pointed out that there is existing recreational use (including illegal behavior) in the Project vicinity. The County made additional recommendations, which may be found in Attachment 3A. During the Solano County Board of Supervisors meeting on November 9, 2021, the issue of road vacation for Liberty Island Road to support Project implementation was discussed. Supervisor Vasquez indicated that there is no legal recreation use occurring along Liberty Island Road.
- LIA believes that the Project vicinity is important for recreation because of ease of access and how few other recreation sites are nearby. LIA stated that the proposed public access to the boat launch ramp would result in a longer boat trip to the locations within the LIER that visitors prefer. LIA believes that DWR needs to provide sufficient parking to accommodate recreation use and has suggested options for an alternate public access plan on the site, which are presented in Attachment 3A.

3.4 2021 On-Site Recreation Use Study

The Fall 2021 recreation study was conducted to respond to comments made by representatives of LIA and DPC that DWR did not have any on-site information about recreation use in the Project vicinity. A goal of the Fall 2021 recreation study was to characterize existing recreation use at the LIER and surrounding areas, collectively referred to as the Study Area, and to determine if the original estimation of recreation use was appropriate. The Study Area included Liberty Island Road where it sits atop the Shag Slough Levee, Shag Slough Bridge, and a remnant levee at the LIER. The study includes three components: vehicle counts from historic aerial photographs, vehicle counts from three motion-activated cameras, and in-person visitor surveys. Following the advice of recreation SME Dr. Glenn Haas, use estimates were evaluated and reported for weekdays and weekend days to determine if the level of use in each location differed, and if the proportion of activities (primarily fishing and hunting) at each location differed. To determine if there was seasonal variation in which locations were used, Dr. Haas also suggested estimating use levels during waterfowl hunting season. The component of the study pertaining to aerial photograph review covered weekdays and weekend days, and two days during previous waterfowl hunting seasons over a five-year period, from 2016 to 2021. The component of the study for motion-activated camera counts occurred daily, from August 2 to October 31, 2021. The period over which in-person visitor surveys were conducted covered six days in September (including a Saturday, Sunday, and Labor Day) and two weekend days during waterfowl hunting season (October 23 and 30).

3.4.1 Methods for Vehicle Counts via Aerial Photography Analysis

Review of aerial photography can be useful for estimating recreation use at a single point in time and was one of the recommendations made by Dr. Whittaker. WRA worked with an outside vendor, Upstream Technology, to count vehicles on historic aerial photographs within the Study Area. Upstream Technology reviewed more than 100 images from 2016 to 2021, but only 13 images were considered to have adequate resolution to accurately count vehicles. Vehicle counts were taken from the 13 images with sufficient resolution and were reported for both weekdays and weekend days. The images were also analyzed to determine whether vehicles were located within 0.25 mile or less from Shag Slough Bridge, or whether they were located along Liberty Island Road at a distance greater than 0.25 mile from the Bridge. These data are relevant because it can be assumed that users who parked greater than 0.25 mile from Shag Slough Bridge are not accessing the LIER but are accessing the western bank of Shag Slough and Shag Slough Levee. Image dates were also analyzed to determine which vehicle counts coincided with waterfowl hunting season.



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3.4.2 Methods for Vehicle Counts via Motion-Activated Cameras

Vehicle counts were derived by reviewing images from three motion-activated cameras within the Study Area that collected data from August 2 to October 31, 2021. Camera 1 is located about 2 miles northwest of the Shag Slough Bridge on Liberty Island Road, Camera 2 is located at a graveled berm south of Lookout Slough approximately 0.5 mile north of the Bridge, and Camera 3 is located near Shag Slough Bridge. Figure 2 shows the locations of the three cameras. The northernmost camera location records all vehicles that come to the Study Area. The Lookout Slough camera records a subset of total vehicles that drive on Liberty Island Road immediately south of where Lookout Slough terminates at Shag Slough Levee, and the Shag Slough Bridge camera records a subset of vehicles that park near the Shag Slough Bridge. Subtracting each camera's vehicle counts from the previous camera's vehicle counts calculates the number of vehicles parked in the areas between the camera locations. Using these camera locations, data can be deduced regarding the number of vehicles that park north of Lookout Slough to the point where Liberty Island Road proceeds in an east/west direction, the number of vehicles parked between the Lookout Slough camera south to the area north of but not near the Shag Slough Bridge, and the number of vehicles parked near Shag Slough Bridge. The sum of the vehicles in these three locations represents the total number of vehicles counted at the northermost camera location. Error! Not a valid bookmark self-reference. shows how vehicle use was calculated and reported for the three segments of Liberty Island Road.

Camera Location	Location Represented
Camera 1 (east-west portion of Liberty Island Road, approximately 2 miles northwest of Bridge) vehicle counts	Total Vehicles on Liberty Island Road in the Study Area
Camera 2 (by Lookout Slough) vehicle counts subtracted from Camera 1 vehicle counts	Total vehicles on the Liberty Island Road segment, north of where Lookout Slough terminates at the Shag Slough Levee
Camera 3 (Bridge location) vehicle counts subtracted from Camera 2 vehicle counts	Total vehicles on Liberty Island Road segment, south of where Lookout Slough terminates at the Shag Slough Levee to the Bridge
Camera 3 vehicle counts	Total vehicles on Liberty Island Road near the Shag Slough Bridge

 TABLE 2

 CAMERA LOCATIONS AND STUDY AREA LOCATIONS REPRESENTED

Cameras operated continuously during the study period, providing vehicle count data daily, 24 hours per day. Counts were generated via a two-step process. The first step was for a Hanford Construction employee to review all images recorded within a given time frame and delete vehicles that were obviously related to on-site work purposes (e.g., Project vehicles). The second step was for a WRA employee to count the remaining images for the time frame and eliminate vehicles that entered and exited the Study Area within 30 minutes. Since it was difficult to identify vehicles to determine if vehicles were on-site for recreational purposes during nighttime photographs, the nighttime images were not included in the counts. As part of data quality assurance/quality control (QA/QC), Dr. John Baas (Ph.D. Forest Resource Management, Senior Open Space Manager at WRA) reviewed all images to validate the counts. Total and average

counts were reported for all weekdays and weekend days for the three camera locations, as well as the number of vehicles observed with a visible watercraft.

3.4.3 Methods for In-Person Visitor Surveys

Surveys of visitors to the Study Area were conducted to provide site-specific information on current recreation use. Visitor surveys were conducted to describe the types of uses occurring in the Project vicinity, the perceived quality of visitor experiences on or near the Study Area, and reasons for visiting. Survey questions were written to be easy to understand and were vetted with data collection staff and three Ph.D.-level staff with experience with survey research. Questions were pretested with several visitors to the Study Area prior to beginning data collection. Because the goal of the study was to describe, not evaluate, existing recreation use, statistical tests were not conducted. Responses to all questions are reported, along with the number of visitors who responded to each question. Survey results should not be considered statistically valid, and their intent is to provide a "snapshot" of visitor use in the Study Area during September and October.

To maximize the number of completed surveys, teams of two and four interviewers visited the Study Area on weekdays and weekend days, respectively. All interviewers participated in a project orientation and practiced interviewing techniques with each other before beginning survey pretesting with visitors. Each survey represents one visitor. When interviewers engaged with a group of visitors, only one visitor in that group was surveyed. Surveys were conducted for six days in September and two Saturdays in October, to obtain information from waterfowl hunters and any other visitors present. The September surveys were intended to obtain information from a variety of visitors and were conducted on Labor Day, three other weekdays, and on a Saturday and Sunday. October 23 was chosen specifically because it was opening day of waterfowl hunting season, and October 30 was chosen to conduct surveys to represent a more typical weekend day during the waterfowl hunting season.

During the September data collection, crews started surveys at 7 a.m. to record early morning use or started at 1 p.m. and collected data until 7 p.m. to capture evening use. Crews counted all visitors they observed during their time on-site, whether visitors completed a survey or not. Crews were instructed to interview one person per group, to ensure that the completed survey represents an "independent observation" (e.g., the person completing the survey is not influenced by responses being offered by other group members being surveyed). During October data collection days, crews started surveys at 9 a.m. to be able to contact hunters as they were returning to their vehicles following hunting. It is typical for some waterfowl hunters to be ready to hunt at dawn to maximize their chances of harvest. Crews remained on-site in the Study Area until 4 p.m. to interview any hunters who came to hunt later in the day, and any other visitors present. Data collection teams were instructed to contact everyone they encountered and interview them if possible. For any individuals that refused to participate in an interview, staff recorded a reason for the refusal (e.g., language barrier). The visitor survey (Attachment 2D) included nine questions and required about five minutes to complete. To maintain confidentiality, visitors were not asked for their name, address, or any other personal information.

To respond to concerns that the Study Area may be used by a high proportion of ethnic minorities and/or disadvantaged communities, the visitor survey was also translated into Spanish, so visitors had the option of completing the survey in English or Spanish.

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4. Results of 2021 On-Site Recreation Use Study

4.1 Results of Vehicle Counts via Aerial Photography Analysis

Tables 3 through 5 present the historic imagery results on weekend days, weekdays, and on waterfowl hunting season days, respectively. Two aerial photos occurred during hunting season (on 11/28/20 and 2/22/21), and the 11 remaining photos occurred in off-hunting season (when it can be assumed that users were not hunting and were participating in other recreation activities such as fishing). Overall vehicle counts ranged from two to 24 vehicles per day. Over the fiveyear period (2016 to 2021) represented by the photos, most vehicles (approximately 76 percent) were parked greater than 0.25 mile from Shag Slough Bridge, even when parking was available within 0.25 mile of the Bridge. The images show a maximum of six cars parked within 0.25 mile of the Bridge, and a maximum of 22 cars parked greater than 0.25 mile away from the Bridge. The two aerial photos from hunting season showed similar results: there were 17 and five cars parked greater than 0.25 mile away from the Bridge during a weekend day and weekday, respectively; and six and two cars parked within 0.25 mile of the Bridge during a weekend day and weekday, respectively. Based on the advice of recreation SME Dr. Glenn Haas, these results were reported by weekend days, weekdays, and hunting season days, and demonstrated variation in vehicles across these three time periods. This work supplements the aerial photographs that the LIA Appellant presented during the May 2021 hearing. It is assumed that users who parked greater than 0.25 mile from Shag Slough Bridge are not accessing the LIER but are accessing the west bank of Shag Slough via the Shag Slough Levee. The vehicle counts from review of aerial photographs suggest that most visitors are using the northern section of Liberty Island Road and the Shag Slough Levee, and that fewer visitors are utilizing Shag Slough Bridge and the LIER.

Date	Image Resolution	Weekend Day	Total Vehicles	Vehicles greater than 0.25 mile of Shag Slough Bridge	Vehicles 0.25 mile or less to the Shag Slough Bridge
6/19/16	1m	Sunday	10	4	6
7/14/18	1m	Saturday	11	6	5
7/19/20	50cm	Sunday	12	10	2
11/28/20	1.5m	Saturday	23	17	6
4/11/21	30cm	Sunday	24	22	2
4/18/21	50cm	Sunday	14	12	2
5/8/21	50cm	Saturday	6	5	1
		Vehicle Totals:	100	76	24

 TABLE 3

 WEEKEND DAY VEHICLE COUNTS FROM HISTORIC AERIAL PHOTOGRAPHS

 TABLE 4

 WEEKDAY VEHICLE COUNTS FROM HISTORIC AERIAL PHOTOGRAPHS

Date	Image Resolution	Weekday	Total Vehicles	Vehicles greater than 0.25 mile of Shag Slough Bridge	Vehicles 0.25 mile or less to the Shag Slough Bridge
6/26/17	50cm	Monday	2	1	1
8/21/20	50cm	Friday	4	3	1
2/22/21	50cm	Monday	7	5	2
3/24/21	30cm	Wednesday	10	9	1
3/26/21	50cm	Friday	5	4	1
4/26/21	1.5m	Monday	2	1	1
		Vehicle Totals:	30	23	7

 TABLE 5

 VEHICLE COUNTS FOR HUNTING SEASON DAYS FROM HISTORIC AERIAL PHOTOGRAPHS

Date *	Image Resolution	Hunting Season Days	Total Vehicles	Vehicles greater than 0.25 mile of Shag Slough Bridge	Vehicles 0.25 mile or less to the Shag Slough Bridge
11/28/20	1.5m	Saturday	23	17	6
2/22/21	50cm	Monday	7	5	2
		Vehicle Totals:	30	22	8

*Duck hunting season was October 21 – January 31 from 2016–2021. During 2021, the late goose hunting season was February 19 to February 23.

4.2 Results of Vehicle Count via Motion-Activated Cameras

The following tables present the vehicle count results from the motion-activated camera images captured during the study period from August 2 to October 31, 2021.

Table 6 and Table 7 show the total and average vehicle counts during the study period. The vehicle count data for weekdays show that a slightly higher proportion of visitors are using the northern section of Shag Slough Levee than the Shag Slough Bridge and the LIER. The vehicle count data for weekend days show that a slightly higher proportion of visitors are using the Shag Slough Bridge and the LIER more often than the Shag Slough Levee. Overall, the vehicle count data suggest that slightly more visitors are using the northern section of the Shag Slough Levee.

 TABLE 6

 TOTAL RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING

 WEEKDAYS AND WEEKEND DAYS, AUGUST 2 TO OCTOBER 31, 2021

Time period	Total Vehicles on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	1,534	863 (56%)	85 (6%)	586 (38%)
Weekend Days	927	374 (40%)	117 (13%)	436 (47%)
Entire Week	2,461	1,237 (50%)	202 (8%)	1,022 (42%)

Table 7 Average Recreation Vehicle Counts from motion-activated cameras on Liberty Island Road During weekdays and weekend days by location, August 2 to October 31

Time period	Average on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	23.6	13.3	1.3	9.0
Weekend Days	35.6	14.4	4.5	16.8
Entire Week	27.0	13.6	2.2	11.2

Table 8 and Table 9 show the total recreation vehicle counts, and Table 10 and

Table 11 show the daily average recreation vehicle counts for non-hunting season (August 2 to October 22) and hunting season (October 23 to October 31), respectively. During the non-hunting season, the vehicle count data for weekdays show that a slightly higher proportion of visitors are using the northem section of Shag Slough Levee than the Shag Slough Bridge and the LIER. The vehicle count data for weekend days show that a slightly higher proportion of visitors are using the Shag Slough Bridge and the LIER than the Shag Slough Levee. Overall, during the non-hunting season, the vehicle count data suggest that slightly more visitors are using the northern section of the Shag Slough Levee. During the hunting season, vehicle count data follow a similar trend to the non-hunting season, with an overall suggestion that slightly more visitors use the northern section of Shag Slough Levee than the Shag Slough Bridge and the LIER. Thus, these

results demonstrate variation in weekday and weekend use and support recreation SME Dr. Glenn Haas' recommendation to estimate use levels by weekdays and weekends.

TABLE 8 TOTAL RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING WEEKDAYS AND WEEKEND DAYS BY LOCATION, NON-HUNTING SEASON (AUGUST 2 TO OCTOBER 22)

Time period	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	727 (55%)	83 (6%)	506 (38%)
Weekenddays	321 (41%)	98 (12%)	367 (47%)
Entire Week	1,048 (50%)	181 (9%)	873 (41%)

TABLE 9

TOTAL RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING WEEKDAYS AND WEEKEND DAYS BY LOCATION, HUNTING SEASON (OCTOBER 23 TO OCTOBER 31)

Time period	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	136 (62%)	2 (1%)	80 (37%)
Weekend Days	53 (38%)	19 (13%)	69 (49%)
Entire Week	189 (53%)	21 (6%)	149 (42%)

TABLE 10

AVERAGE RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING WEEKDAYS AND WEEKEND DAYS BY LOCATION, NON-HUNTING SEASON (AUGUST 2 TO OCTOBER 22)

Time period	Average on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	21.9	12.1	1.4	8.4
Weekenddays	35.7	14.6	4.5	16.7
Entire Week	25.6	12.8	2.2	10.6

TABLE 11

AVERAGE RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING WEEKDAYS AND WEEKEND DAYS BY LOCATION, HUNTING SEASON (OCTOBER 23 TO OCTOBER 31)

Time period	Average on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	43.6	27.2	0.4	16.0
Weekenddays	35.4	13.3	4.8	17.3
Entire Week	39.9	21.0	2.3	16.6

Table 12 shows recreation use levels during opening day of waterfowl hunting season (October 23) and use levels on the following Saturday (October 30). The vehicle count data suggest an elevated amount of use on opening day (October 23) than the following weekend day (October 30). The vehicle count data also show that on both days, visitors used the Shag Slough Levee at a much higher rate than the Shag Slough Bridge and the LIER.

 TABLE 12

 TOTAL RECREATION VEHICLE COUNTS FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD, OCTOBER 23 AND 30

Time period	Total on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
October 23	144	63	48	33
October 30	81	37	26	18

Table 13 shows those vehicles with some type of watercraft for August 2 through October 31. The average counts for vehicles with watercrafts on weekdays, weekends, and during the entire week show that a majority of the vehicles are using the Shag Slough Bridge and the LIER more frequently than the Shag Slough Levee.

 Table 13

 Total Recreation Vehicle Counts with watercraft from motion-activated cameras on Liberty

 Island Road during weekdays and weekend days, August 2 to October 31

Time period	Total on Liberty Island Road	Segment North of Lookout Slough	Segment South of Lookout Slough	Near Shag Slough Bridge
Weekdays	40	6 (15%)	2 (5%)	32 (80%)
Weekend Days	56	11 (20%)	9 (16%)	36 (64%)
Entire Week	96	17 (18%)	11 (11%)	68 (71%)
Table 14 and

Table 15 show the total recreation vehicle counts with versus without watercraft between nonhunting season (August 2 to October 22) and hunting season (October 23 to October 31), respectively. Vehicle count data suggest that the majority of recreational users did not have a watercraft. It should be noted that these numbers do not necessarily capture all use of inflatable or hard-shell kayaks, or flotation tubes that are used by waterfowl hunters since these watercraft are more difficult to visually detect in a camera image.

 TABLE 14.

 TOTAL RECREATION VEHICLE COUNTS WITH AND WITHOUT WATERCRAFT FROM MOTION-ACTIVATED CAMERAS ON LIBERTY ISLAND ROAD DURING NON-HUNTING SEASON (AUGUST 2 TO OCTOBER 22)

Time period	Segment North of Lookout Slough		Segment South of Lookout Slough		Near Shag Slough Bridge	
Watercraft	With	Without	With	Without	With	Without
Weekdays	3 (0.4%)	724 (99.6%)	5 (6%)	78 (94%)	27 (5.3%)	479 (94.7%)
Weekend Days	3 (1%)	318 (99%)	15 (15.3%)	83 (84.7%)	29 (7.9%)	338 (92.1%)
Entire Week	6 (0.6%)	1,042 (99.4%)	20 (11%)	161 (89%)	56 (6.4%)	817 (93.6%)

 Table 15

 Total Recreation Vehicle Counts with and Without watercraft from motion-activated cameras on Liberty Island Road during hunting season (October 23 to October 31)

Time period	Segment No Sic	nent North of Lookout Segment South of Lookout Slough Near Shag Slough Brid		Segment South of Lookout Slough		Slough Bridge
Watercraft	With	Without	With	Without	With	Without
Weekdays	4 (2.9%)	132 (97.1%)	2 (2.5%)	78 (97.5%)	5 (2.3%)	213 (97.7%)
Weekend Days	9 (17%)	44 (83%)	1 (1.4%)	68 (98.6%)	7 (5%)	134 (95%)
Entire Week	13 (6.9%)	176 (93.1%)	3 (2%)	146 (98%)	12 (3.3%)	347 (96.7%)

4.3 Results of In-Person Visitor Surveys

4.3.1 Overview of Visitor Survey Results

Observational data support the conclusion that most anglers use the western bank of Shag Slough Levee instead of the eastern bank located in the LIER. For the September sampling period, which occurred for six days, a total of 189 visitors were counted (67 of which were surveyed) and 145 were observed recreating on Shag Slough Levee. Surveys taken in September found that the majority (86 percent, or 51 out of 59 anglers surveyed) of visitors who were recreating in the Project Area to fish used the western bank of Shag Slough Levee. During the October sampling period, a total of 171 visitors were counted (68 of which were surveyed), and 91 were observed recreating on Shag Slough Levee. This sampling period, which included two days during waterfowl hunting season, displayed a similar pattern as that seen in September, with the majority (78 percent, or 35 out of 45 anglers surveyed) of visitors who were recreating in the Study Area to fish using the western bank of the Shag Slough Levee. However, most of the hunters surveyed during October (approximately 86 percent) were observed within the LIER and Shag Slough Bridge area.

Among the 67 completed surveys in September, three were completed in Spanish. One group of three users observed on a boat in Shag Slough spoke neither English nor Spanish, and their activities were captured visually rather than verbally in the survey. All respondents were recorded in a log form, and a review of that form revealed several individuals who spoke only Spanish.

Watercraft use was observed more often during the hunting season. In September, approximately 17 percent of recreational users were observed using watercraft, while the majority (approximately 68 percent) of visitors recreating for hunting purposes were seen using a type of watercraft, with the most common type being hard kayak.

The nine questions included in the visitor survey, along with summaries of the responses for September and October survey respondents are discussed below. Figures 5 through 7 and Tables 16 through 26 in Attachment 2E detail the results summarized below from the September and October on-site visitor surveys.

Question 1: What activities do you plan to do here today?

Table 16 shows that fishing primarily for leisure and for food were the most and second most reported responses, respectively, in both September and October. Most of the recreationists (approximately 80 percent) surveyed over six days in September indicated that they were primarily within the Study Area to fish for leisure, while approximately 22 respondents (33 percent) stated that they were visiting to fish for food, compared to 46 percent and 41 percent respectively for October surveys. Of the September surveys, only two respondents (3 percent) indicated that they were present for activities related to hunting, while 24 responses (34 percent) identified activities related to hunting in October. Paddle sports, wildlife viewing, and hiking were other activities reported at less than 10 percent each.

Question 2: How long have you been coming here?

The data in Table 17 indicated that most of the visitors surveyed are repeat visitors (89 percent among September visitors, 85 percent for October visitors, and 91 percent for hunters only). Most of the visitors (approximately 66 percent of those surveyed in September and 69 percent in October) have been coming to the Study Area for 5 years or less (Figure 5 and Figure 6). This finding also applies to hunters (Figure 7). Approximately one-quarter of all visitors surveyed in September and approximately one-fifth of all visitors surveyed in October have been coming to the Study Area for surveyed in October have been coming to the Study Area for surveyed in October have been coming to the Study Area for more than 10 years. When looking at hunters specifically, 20 percent reported visiting the Study Area for more than 10 years.

Question 3: How often do you come to this area to recreate?

The most common answer among those surveyed stated that they visit the Study Area a few times per year (26 percent in September and 29 percent in October). This response was even more common among the hunting-only respondents, with 45 percent of hunters stating that they came to the Study Area a few times a year (Table 18). One possible reason for this change in visiting patterns could be that hunting season is temporally limited when compared to other recreational activities, such as fishing or hiking, which can be accomplished year-round.

Question 4: How much time do you typically spend when you are recreating here?

Most of the visitors surveyed (approximately 84 percent in September and 76 percent in October) indicated that they recreate for about a half a day or less (Table 19). Only 14 percent of recreational users surveyed in September and about 24 percent of recreational users surveyed in October, said that they spent about a full day recreating in the area. This number was highest amongst hunters, as seven respondents who hunt (approximately 29 percent) answered that they

spent about a full day recreating in the area (Table 19). The results show that the hunters spend more hours at the Study Area during a single visit than other visitors recreating in the area.

Question 5: What activities have you done here previously?

As shown in Table 20, most of the visitors surveyed who had previously visited the Study Area to fish, fished along Liberty Island Road on the Shag Slough Levee. The second most common fishing location recorded was the LIER for visitors surveyed in September and in Shag Slough (presumably via watercraft) for visitors surveyed in October. All of the visitors who participated in hunting activities previously had done so at the LIER. The results show that Liberty Island Road is popular for fishing while the LIER is popular for hiking. Visitors who had participated in hiking and wildlife viewing commonly answered that they visited both Liberty Island Road and the LIER, with hikers slightly favoring the LIER while wildlife viewing was slightly more common along Liberty Island Road. Paddle sports predominantly occurred in Shag Slough. Those who visited for this purpose also indicated that they accessed Shag Slough after parking on the northern section of Liberty Island Road or near the LIER in similar numbers.

Question 6: How would you generally rate the quality of whatever activities you have done here before relative to other spots in the Delta?

According to the data (Table 21), the most common response of the visitors from both September and October, who selected fishing, rated the quality of fishing as being either "the same" or "better" relative to other spots in the delta. Only a few visitors who selected fishing, reported "I do not do this activity in other places." Approximately 96 percent and 93 percent of September and October visitors surveyed, respectively, also fish in other places in the Delta. The most common response of visitors who indicated they hunted in other locations rated the quality of hunting as "better" relative to other spots in the delta and 50 percent reported "I do not do this activity in other places." One response for hunting rated the quality of hunting "worse" relative to other spots in the delta. For most of the activities listed in Table 21, the most common response is that the Study Area provides "the same" or "better" quality relative to other spots in the Delta.

Question 7: Why did you choose to come here over other places in the Delta?

Table 22 shows the responses for respondents in September and October for why they chose to come to the Study Area versus other places in the Delta. Approximately 61 percent of those surveyed in September and 59 percent of those surveyed in October responded with "it is close to my home/easy access" when asked why they chose to come to the Study Area over other places in the Delta; this was also the most recorded response amongst the hunters. As shown in Table 22, most of the hunters surveyed (approximately 65 percent) responded with "it is close to my home/easy access" when asked why they chose to come here over other places in the Delta. However, over half of the hunters (approximately 52 percent) also indicated that they hunted on the LIER because there are "No fees/free parking."

Question 8: Do you go to any other areas in the Delta to participate in the following activities?

All responses from September and October, as well as the hunter responses, that were recorded for Question 8, are summarized in Table 23. Approximately 81 percent of those surveyed in September and 70 percent of those surveyed in October answered "yes" when asked if they go to any other areas in the Delta to participate in the following activities: fishing, paddle sports, hiking, wildlife viewing, hunting, and other, in comparison to the 68 percent of hunters who answered "yes" to the same question. In terms of fishing activities, in September, 48 percent of the respondents replied that they go to Grizzly Island and Rio Vista (16 responses for each), 12 visitors (18 percent) responded that they go to Suisun Marsh, and five visitors (7 percent) responded that they go to Lake Berryessa. In October, there were 12 (18 percent) responses recorded for Rio Vista and six responses (9 percent) each for both Grizzly Island and Suisun in terms of areas visitors also went for fishing activities. Among the hunters surveyed, 46 percent hunt in other locations, with Grizzly Island being the most reported response.

Question 9: Is there anything else you want to tell me about this visit, or any previous visits here? Comment categories and total number of comments received under each category are summarized in Table 24 and Table 25 for September and October, respectively. In September, 67 individuals provided a total of 90 comments in response to Question 9. In October, 68 individuals provided a total of 99 comments. Among September respondents, the most recorded comment to Question 9 was regarding the amount of trash in the area and was mentioned by 22 respondents. Several respondents commented on the need for trash receptacles to be placed in the area to cut down on littering, while two suggested increased law enforcement patrols to reduce dumping in the area. About 12 percent of the total comments pertained to "enjoy visiting the Study Area" or mentioned specific aspects the respondents enjoyed, such as the easy access, quietness, wildlife, safety, or the lack of crowds. The third most recorded comment was regarding public access to Liberty Island Road and the Shag Slough Bridge, with 10 percent of the comments voicing concern over losing access to the road and Bridge. Three other respondents expressed comments indicating a strong preference for a public boat launch.

As shown in Table 25 and Table 26, among October respondents the most reported comment categories were "too much trash/wants trash cans/dumpsters" (9 percent and 5 percent of the comments from all October surveys and waterfowl hunters only surveys, respectively), and "enjoy location" (12 percent and 12 percent of comments from all October and waterfowl hunters only surveys, respectively).

Survey results were reported by September and October to see if there were differences in responses, per a recommendation by recreation SME Dr. Glenn Haas. Differences were found in the amount of time spent on-site, with October respondents spending a greater amount of time. October respondents also stated they visited other places in the Delta to recreate.

4.3.2 Additional Waterfowl Hunting Results

There were a total of 26 reported hunters contacted in October, among which 24 were willing to be surveyed. There were two recreationists visiting the Study Area for hunting-related purposes in September; these respondents were scouting for hunting areas. Therefore, these individuals and their responses were included in the September survey results since they were not actually hunting. There were 20 hunter-related surveys submitted on Saturday, October 23, 2021, which was opening day for waterfowl hunting season, and four surveys on October 30. Most of the hunters (68 percent) were seen using some type of watercraft, with the most common type being hard kayak. Most of the hunters have been coming to the area for one to five years to hunt and reported that they tend to stay for half a day.

The following data reported in Figure 3 and Figure 4 were collected from recreationists who identified as hunters in September and October. As depicted by Figure 3 below, most of the hunters were willing to be surveyed.

92.9% • Yes • No: Duck hunter with dog, uncooperative • Duck hunters not willing to talk

Figure 3. Hunter Willingness to be Surveyed

Most of the hunters (approximately 68 percent) were seen using a type of watercraft, with the most common type being hard kayak (Figure 4).

Figure 4. Observations on Whether or not the Hunter was using Watercraft



5. Conclusions

DSC remanded DWR's Certification for the Project under Delta Plan Policy G P1(b)(3) in part because it did not find substantial evidence in the record that the Certification met the BAS criterion of Inclusiveness with regard to recreation use estimation methods. The DSC's Determination asserted that DWR failed to include information from multiple census tracts when estimating shoreline fishing on the LIER, even though this type of information was readily available. In 2019, DWR used comprehensive sources of relevant information to estimate shoreline fishing use for the LIER. Part of that information included population data from a census tract in close proximity to the Project site. Based on the evaluation of information obtained in 2019, DWR concluded the LIER is a relatively low use area for shoreline fishing, and that anglers had multiple other locations where they could fish in the Delta.

In response to the DSC's remand decision, DWR expanded its sources of information by conducting interviews with SMEs, incorporating the results of a 2021 Delta-wide environmental justice survey, conducting listening sessions with stakeholders, and undertaking an on-site study of recreational users.

DWR sought advice from three SMEs in outdoor recreation research. The SMEs agreed that using information from multiple census tracts to estimate recreation for the Study Area is not appropriate.

The environmental justice survey confirms that fishing in the Delta is a way of life for Disadvantaged and Severely Disadvantaged (DAC/SDAC) communities and showed that DAC/SDAC interest in the Delta is diffuse and not concentrated in the Project area.

DWR and EIP conducted listening sessions and focused interviews in August and September 2021 with the Appellants of the Project's Certification and other stakeholders to better understand their concerns about the proposed Project and how it might affect recreation use of Liberty Island Road, the Shag Slough Bridge, and the LIER. One important take-away from the listening sessions (in regards to BAS) is that current on-site information about recreation use in the Project vicinity could be expanded. In response to comments from LIA and DPC representatives, DWR conducted an on-site recreation use study, which evaluated recreation use based on historic aerial photography, motion-activated cameras, and on-site visitor surveys within a Study Area that included Liberty Island Road atop Shag Slough Levee, Shag Slough Bridge, and the LIER.

Results of the additional recreation resource literature review and 2021 on-site recreation use study support DWR's original conclusions characterizing recreation use of the Project vicinity. Important conclusions that can be drawn from the additional analyses include:

- Fishing is the most popular recreational use in the Project vicinity.
- The LIER is a popular fishing location with some local residents, but the Project site is a relatively low recreation use area.
- Most recreational use is by locals.
- Most visitors are using the northern section of Liberty Island Road and the Shag Slough Levee, and that fewer visitors are utilizing Shag Slough Bridge and the LIER.
- Most shoreline fishing use in the vicinity occurs along Liberty Island Road, not on the LIER.
- A majority of vehicles with associated watercraft use the Shag Slough Bridge and the LIER more frequently than the Shag Slough Levee.
- Most survey respondents go to other recreation areas in the Delta in addition to the Project site.
- In regard to those respondents (surveyed in both September and October) who stated they fish at other locations, 16 alternate recreation locations were mentioned.

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• A high proportion of waterfowl hunters use watercraft, but very few anglers use a boat or some other form of watercraft.

B-6 Letter 3: Liberty Island Access, Attachment 2B

ATTACHMENT 2B: SME INTERVIEW NOTES

Meeting Notes from Subject Matter Expert (SME) Interviews

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Meeting Dates: July 23 and August 2, 2021

Interview Format

Each participant was given an overview of the Project, then asked Questions 1 and 2 below. Question 3 was only posed to Dr. Bill Spain.

- 1. Is the use of additional census tract information to estimate recreation use at the LOS project site appropriate?
- 2. What are your recommendations to address the DSC remand request?
- 3. Is use of location-based mobile app data appropriate for estimating recreation use at the LOS project site?

SME Interview 1

Interviewer: Dr. John Baas, Senior Open Space Planner, WRA, Inc.

Interviewee: Dr. Glenn Haas, former Department Head, Recreation Resources and Landscape Architecture Department, Colorado State University, and independent recreation planning consultant

Date, Time, and Type of Interview: Interview occurred on 7/23/21 around 8:30 am PST. Interview occurred by phone and lasted approximately 15-20 minutes.

Notes from conversation with Dr. Haas:

- In response to the question about how to respond to the remand decision Dr Haas suggested that: "without visitor use information in the absence of data and facts, one must rely on expert opinion (professional judgment), reasonable assumptions, and a logical thought process."
- Dr. Haas also stated, "I would start at the lowest level you can and then aggregate up for the year."
 - For example, what are use levels at boat launch parking lot areas on weekends during hunting season? If possible, consult a local game warden for professional judgement on number of daily cars.
 - This should also be done for weekdays, outside of hunting and fishing season, etc.
 - DWR should use whatever data they have to estimate use.
 - However, don't use population (Census tract) data, it is only good for future projections.
- Dr. Haas also suggested that estimating use levels should be done with a numeric range not a specific number—it is too hard to defend and argue a specific visitor use number.

"Your goal is to be reasonable, not right because you cannot achieve the absolute true, right answer."

• Dr. Haas recommended at least estimating a range of use for in season (fishing and hunting) and out of season periods, and for weekends and weekdays. "Do this for each key access point (launch, parking) affected by the proposed Project."

SME Interview 2:

Interviewer: Dr. John Baas, Senior Open Space Planner, WRA, Inc.

Interviewee: Dr. Doug Whittaker, Confluence Research and Consulting, Expertise in Visitor Capacity and Use Studies

Date, Time, and Type of Interview: Interview occurred on 8/2/21 around 9:30 am PST. Interview occurred by phone and lasted approximately 15-20 minutes.

Notes from conversation with Dr. Whittaker:

- Use of census data to estimate recreation use for the Lookout Slough project is not recommended. "it's a terrible idea."
- There is a weak correlation between population size and recreation use levels at specific sites.
- Other factors that are much more influential than population are: societal trends, and the Pandemic.
- In the absence of good visitor use data, one could estimate use via aerial photographs, and one should estimate a range of use, NOT a single number.
- Dr. Whittaker indicated that trying to come up with a single number for the study area is not advisable, and that if DSC or DWR insists on estimating use, then establish a range of use. "Coming up with a single visitor use number is a waste of time."

SME Interview 3:

Interviewer: Dr. John Baas, Senior Open Space Planner, WRA, Inc.

Interviewee: Dr. Bill Spain, Instructor, Department of Recreation and Public Health, San Jose State University

Date, Time, and Type of Interview: Interview occurred on 7/23/21 at 9:30 am PST. Interview occurred by phone and lasted approximately 15-20 minutes.

Notes from conversation with Dr. Spain:

- Dr. Spain suggested that one would only use population/Census tract data if you are going to construct a random utility model, for which you need information about visitor choices to other recreation areas in the travel time radius of the study area.
- Dr Spain then stated "I strongly recommended obtaining some visitor counts on-site to characterize existing visitor use."
- When asked about mobile application data, Dr. Spain cautioned against using this type of information unless DWR has the ability to validate with other use estimation methods.

B-7 Letter 3: Liberty Island Access, Attachment 2E

ATTACHMENT 2E: ADDITIONAL DETAILED RESULTS FROM ON-SITE VISITOR SURVEYS

Additional Detailed Results from On-Site Visitor Surveys

Response	September Visitors	October Visitors
Fishing (primarily for leisure)	80.3%	45.6%
Fishing (primarily for food)	33.3%	41.2%
Paddle Sports	9.1%	1.5%
Hiking	3%	0%
Wildlife Viewing	9.1%	2.9%
Hunting	1.5%	33.8%
Other Activity	6%	6%

 TABLE 16

 Responses¹ to question 1, "What activities do you plan to do here today?"

 TABLE 17

 PROPORTION OF FIRST-TIME VISITORS

Response	September Visitors	October Visitors (Hunters Only)
Yes, first visit	10.8%	14.7% (8.3%)
No, been here before	89.2%	85.3% (91.7%)
Total:	100%	100% (100%)

 TABLE 18

 Responses to question 3, "How often do you come to this area to recreate?"

Response	September Visitors	October Visitors (Hunters Only)
At least once a week	19.3%	15.5% (18.2%)
Once a week	14%	12.1% (9.1%)
Oneamonth	15.8%	6.9% (9.1%)
A couple times a month	17.5%	31% (13.6%)
A few times a year	26.3%	29.3% (45.5%)
Less than a few times a year	7%	5.2% (4.5%)
Total:	100%	100% (100 %)





Figure 6. October Responses to question 2, "how long have you been coming here for recreation?"







TABLE 19 Responses to question 4, "How much time do you typically spend when you're recreating here?"

Response	September Visitors	October Visitors (Hunters Only)
Less than an hour	3.5%	0% (0%)
A few hours	42.1%	31% (18.2%)
About a half a day	38.6%	44.8% (50%)
About a full day	14%	24.1% (31.8%)
More than a full day	1.8%	0% (0%)
Total:	100%	100% (100%)

TABLE 20
RESPONSES ¹ TO QUESTION 5, "WHAT ACTIVITIES HAVE YOU DONE HERE PREVIOUSLY?"

Previous activity	Liberty Is	land Road	On Sha Bri	g Slough dge	In Shag	Slough	Liberty Ecologic	y Island al Reserve
Month of Visitors:	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)
Fishing	84.9%	79.6% (46.7%)	22.6%	16.3% (13.3%)	28.3%	32.7% (53.3%)	40%	30.6% (53.3%)
Paddle Sports	27.3%	40% (50%)	9%	0% (0%)	100%	80% (75%)	27.3%	40% (50%)
Hiking	60%	66.7% (50%)	40%	33.3% (0%)	0%	0% (0%)	80%	66.7% (100%)
Wildlifeviewing	71.4%	50% (0%)	71.4%	50% (0%)	42.9%	25% (50%)	57.1%	50% (100%)
Hunting	0%	5.6% (5.9%)	0%	0% (0%)	0%	5.6% (5.9%)	100%	100% (100%)
Other	n/a	80% (66.7%)	n/a	0% (0%)	n/a	0% (0%)	n/a	40% (66.7%)
1.0:								

¹ Since survey respondents could check multiple responses, they do not sum to 100 percent.

TABLE 21 Responses ¹ to question 6, "How would you generally rate the quality of whatever activities you have done here before relative to other spots in the Delta?"

Recreational Activity	Wo	orse	The	Same	Ве	tter	l do not activity pla	do this in other ces
Month of Visitors:	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)	Sept.	Oct. (Hunters Only)
Fishing	13.5%	6.7% (13.3%)	48.1%	53.3% (40%)	34.6%	44.5% (40%)	3.9%	6.7% (13.3%)
Paddle Sports	0%	0% (0%)	37.5%	0% (0%)	37.5%	57.1% (100%)	25%	42.9% (0%)
Hiking	50%	0% (0%)	0%	16.7% (0%)	50%	33.3% (100%)	0%	50% (0%)
Wildlifeviewing	0%	0% (0%)	20%	12.5% (0%)	60%	37.5 (66.7%)	20%	30.4% (33.3%)
Hunting	100% ²	4.4% (5.3%)	0%	26.1% (21%)	0%	43.5% (52.6%)	0%	50% (21%)
Other	n/a	0% (0%)	n/a	25% (100%) ²	n/a	0% (0%)	n/a	75% (0%)

The quality on previous visits generally was:

^{1.} Since survey respondents could check multiple responses, they do not sum to 100 percent.

^{2.} Represents one response.

TABLE 22

RESPONSES¹ TO QUESTION 7, "WHY DID YOU CHOOSE TO COME HERE OVER OTHER PLACES IN THE DELTA?"

Response	September Visitors	October Visitors (Hunters Only)
It is closeto my home/easy access	61.3%	59.1% (65.2%)
No fees/free parking	14.5%	37.9% (52.2%)
I usually have a better experience here	33.9%	39.4% (30.4%)
The place I would rather be recreating at is closed now	1.6%	15.2% (8.7%)
I read on the internet that conditions are good for my activity here (e.g., fishing forums, kayaking groups, social media posts, etc.)	6.5%	9.1% (0%)
It was recommended to me by someone I know	11.3%	13.6% (8.7%)
Other	8%	12% (21.5%)

¹ Since survey respondents could check multiple responses, they do not sum to 100 percent.

Activity		Specify Location	
Fishing	Rio Vista (28) Grizzly Island (22) Suisun Bay/Marsh (18) Lake Berryessa (6) Isleton (6) Sacramento River (6) Knights Landing (4) 8 Mile Road (3) Bran nan Island (3) Everywhere in Delta (3) Sherman Island (3) West Sacramento (3) Yolo Bypass (3) Antioch (2) Deep Water Channel (2) Everywhere in Delta (2) Freeport (2) Miner Slough (2) Napa (2) Prospect Island (2) Sacramento (2) West Sacramento (2) Wimpy's Marina (2)	Antioch River (1) Aqueduct Canal (1) Arrowhead Launch (1) B&W Resort (1) Bacon Island (1) Bay Side (1) Belden's Landing (1) Cruise Island (1) Did not specify location (1) Eddo's Harbor & RV Park (1) Folsom Lake (1) Folsom Lake (1) Folsom Lake (1) French Tacks (1) Garden Highway (1) Georgiana Slough (1) Hastings Island (1) Hosings Island (1) Holland Reservoir (1) Holland Reservoir (1) Jefferson (1) Knight's Island (1) Lake Malasy (1)	Lazy Inn (Near Glenwood) (1) Liberty Island (1) Lodi (1) Marsh Canal (1) Merritt Island (1) Montezuma (1) Mothball Fleet (1) Nurse Slough (1) Paradise (1) Pirate's Lair (1) Putah (1) Richmond (1) Ryer Island (1) Sacramento Delta (1) Sloughs in the area (1) Snog Grass Slough (1) Snug Harbor (1) Steamboat Slough (1) Sturgeon Island (1) Sugar Barge Resort (1) Tracy (1) Vacaville (1) Whiskey Slough (1) Yolo County (1)
Paddle Sports	Suisun Marsh (3) Rio Vista (3) Grizzly Island (2) Antioch (1)	Deepwater Channel (1) Isleton (1) Prospect Island (1) Prospect Slough (1)	Sacramento River(1) South Fork American River (1)
Hiking	All Over (1) Grizzly Island (1) Isleton (1)	Prospect Island (1) Rio Vista (1) Ryer Island (1)	Snug Harbor (1) Suisun Marsh (1) Yolo (1)
Wildlife Viewing	Rio Vista (2) Yolo Bypass (2) Davis (1) Grizzly Island (1)	Isleton (1) Lake Berryessa (1) Prospect Island (1) Ryer Island (1)	Snug Harbor (1) Suisun Marsh (1) Woodland (1) Yolo (1)
Hunting	Grizzly Island (6) Suisun Marsh (3) Did Not Specify Location (3) Rio Vista (2) Hastings (1)	Mothball Fleet (1) Prospect Island (1) Prospect Slough (1) Sonoma Marshes (1)	Staten Island (1) The Valley (1) Venice Island (1) Yolo (1)
Other	Lower Sherman (not for hunting)	(1)	

 TABLE 23

 Responses to question 8 "Do you go to any other areas in the Delta to participate in the Following activities?"-September and October Surveys

TABLE 24
RESPONSES TO QUESTION 9 "IS THERE ANYTHING ELSE ¹ YOU WANT TO TELL ME ABOUT THIS VISIT, OR
PREVIOUS VISITS HERE?" – SEPTEMBER SURVEYS

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	24%	
Enjoy location	11	12%
Notcrowded	4	4%
Easy access	3	3%
ls safe	3	3%
Does not like trees by the Bridge	1	1%
Wants more preservation of outdoors and opportunities to fish and hunt	1	1%
More marketing of natural areas	1	1%
Want boat/kayak laun ch	3	3%
Proposed launch too far from the LIER	1	1%
Concerned about public access - road, Bridge, and water	9	10%
Wants camping	1	1%
Wants fish cleaning station	1	1%
Add toilets	1	1%
More trees	3	3%
More law enforcement patrols	2	2%
Scouting for duck hunting	1	1%
Prefer shore fishing over boat	1	1%
Dogs off-leash allowed	1	1%
Mosquitos	1	1%
With tank getting water	1	1%
Fish does not bite	1	1%
Unaware of the project	1	1%
No comment/did not know enough to an swer	16	18%
Total:	90	100%
¹ Respondents could mention multiple comments	•	•

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	9	9%
Enjoy location	14	14%
Not crowded/Quiet	9	9%
Easy access	9	9%
Wants to maintain open space/public access	4	4%
Want boat/kayak launch	2	2%
Concerned about public access – road, Bridge, and water	8	8%
Wants more parking	2	2%
More trees	1	1%
More law enforcement patrols	1	1%
Scouting for duck hunting	1	1%
Concerns about shutting down the place/charging for entering	4	4%
Bass boat out of Shag Slough	1	1%
Concerns about changes in fishing	1	1%
Concerns about water level	1	1%
Dogs off-leash allowed	1	1%
Fishing is not as good as before	1	1%
No comment/did not knowenough to answer	30	30%
Total:	99	100%

 TABLE 25

 Responses to Question 9 "Is there anything else¹ you want to tell me about this visit, or previous visits here?" – October Surveys

¹Respondents could mention multiple comments

Comment Category	Number of Comments	Percentage of Comments
Too much trash/wants trash cans/dumpsters	2	5%
Enjoy location	5	12%
Not crowded/Quiet	2	5%
Easy access	5	12%
Wants more preservation of outdoors and opportunities to fish and hunt	1	2%
More marketing of natural areas	1	2%
Want boat/kayak launch	2	5%
Concerned about public access - road, Bridge, and water	5	12%
More law enforcement patrols	1	2%
Scouting for duck hunting	2	5%
Concerns about shutting down the place/charging for entering	3	7%
Bass boat out of Shag Slough	1	2%
No comment/did not know enough to an swer	11	27%
Total:	41	100%

 TABLE 26

 Responses to Question 9 "Is there anything else¹ you want to tell me about this visit, or previous visits here?" – Hunter Surveys

¹ Respondents could mention multiple comments.

B-8 Letter 3: Liberty Island Access, Attachment 4

ATTACHMENT 4 – PUBLIC ACCESS SUMMARY

LOOKOUT SLOUGH TIDAL HABITAT RESTORATION AND FLOOD IMPROVEMENT PROJECT

Solano County, California

Prepared on Behalf Of:

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

Prepared For:

EIP III Credit Co., LLC 2330 Marinship Way, Suite 120 Sausalito, CA 94965

Contact: Stephanie Freed stephanie@ecosystempartners.com

Prepared By:

WRA, Inc. 2169-G East Francisco Blvd. San Rafael, CA 94901

Contact: John Baas Baas@wra-ca.com

Date: December 2021







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1. INTRODUCTION

As presented in the July 16, 2021 Determination Regarding Appeals of the Certification of Consistency by the California Department of Water Resources for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Determination) by the California Department of Water Resources (DWR) for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project (Project), Delta Plan Policy DP P2 states that: "(a) Water management facilities, ecosystem restoration, and flood management infrastructure must be sited to avoid or reduce conflicts with existing uses or those uses described or depicted in city and county general plans for their jurisdictions or spheres of influence when feasible, considering comments from local agencies and the Delta Protection Commission (DPC)."

The Delta Stewardship Council (DSC) found that the *Certification of Consistency for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project* (Certification) was not supported by substantial evidence in the record as it relates to DP P2. The specific matters being remanded to DWR for reconsideration under DP P2 include:

- 1. Recreational uses of Liberty Island Road, the Shag Slough Bridge, and the Liberty Island Ecological Reserve (LIER) do not constitute existing uses.
- 2. The Covered Action would not conflict with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER.
- 3. The Department avoided or reduced conflicts with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER when siting the Lookout Slough Project.

This document (Attachment 4 to the Re-Certification) is part of a package created by DWR to resubmit a Certification of Consistency for the Project (Re-Certification). DWR prepared additional information in response to the Determination related to items 1 and 2, which is presented in Attachment 3 to the Re-Certification. Related to item 3, Attachment 3 also discusses Project siting and potential conflicts with existing recreation uses. This document addresses how the Project will minimize conflicts with existing recreational uses of Liberty Island Road, the Shag Slough Bridge, and the LIER by altering existing recreational uses and by providing additional recreational benefits.

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2. PUBLIC ACCESS SUMMARY

Currently, the only legal access to waters in or around the Project site occurs seasonally via Liberty Island Road, across a structurally deficient bridge, to levees that are unmaintained and subject to flooding. All other access to waters from Liberty Island Road is across private lands that are maintained by Reclamation District (RD) 2098 (see Figure 1). The Project will create recreational benefits by converting 3,400 acres of privately owned land to public lands, which will allow access to open water within the Project site (see Figure 2).

The Project will minimize conflicts with existing recreational uses by creating new recreational facilities and opportunities, altering existing public uses such as shoreline fishing, and maintaining access to the LIER by boat. This document describes what will be included as part of the Project to create recreational benefits and reduce conflicts with existing recreational uses. This document was developed based on information previously considered as well as additional information on existing recreational uses and input on what can be done to benefit recreational use of the LIER. Information on existing proposals from stakeholder engagement, and evaluations on the feasibility of incorporating proposals from stakeholders is discussed in Attachments 2 and 3. Recreational benefits of the Project are presented below.

2.1 Improved Public Accessibility

2.1.1 New Navigable Tidal Channels

The Project will create over 20 miles of new navigable public tidal channels that will be accessible to watercraft users (boaters, kayakers, etc.) for fishing, hunting, wildlife viewing, and other forms of aquatic recreation. The Project includes nine locations where the Shag Slough Levee will be breached and two locations where the Vogel berm will be breached to create new connections for these tidal channels. The width of the breaches to Shag Slough (i.e., the channel mouths) will range from approximately 190 to 610 feet (see Figure 2). In addition, breaches in the berms of Vogel Island will range from approximately 45 feet to 154 feet across (see Figure 2). Unlike the currently flooded portions of the LIER, the proposed network of new tidal channels will be large enough to provide opportunities for exploring the Project site's waterways and wetlands by watercraft. Tidal channels were designed to have water depths of approximately 2.1 to 6.5 feet, depending on the daily tidal cycle, and range up to 2 miles in individual channel length. Tidal channels will be managed to maintain free flow of tidal and flood waters, which

may include the removal of obstructive debris, woody vegetation,¹ and non-native vegetation that could limit accessibility by watercraft, unlike the conditions observed at the LIER, where open waters contain snags, submerged debris, floating objects, old piers and pylons, and remnant submerged structures (see the discussion below under *Operation and Maintenance* for further details).

These breaches to the interior of the Project site will accommodate opportunities for a variety of boater skill levels to access nature. Novice paddlers will be able to use the channel nearest the new boat ramp (discussed below) to gain access to both Shag Slough and the interior marsh. Boaters will be able to launch watercrafts from the boat ramp and paddle through the newly created breaches into Shag Slough to more easily access the channel known locally as the "Stair Step," and farther down into the LIER. The boat ramp is approximately half the distance to the "Stair Step" than the Shag Slough Bridge, allowing for closer water access. These expanded and improved options for water access will provide a variety of recreational experiences for users. The nature of the landscape adjacent to these new channels will mature into habitats similar to those areas in the LIER that paddlers frequent – an open water area interspersed with a variety of marsh habitats.

2.1.2 Boat Ramp

Currently, there are no formally designated recreational facilities associated within the LIER,² and all boat launching occurs off of the unimproved levee shoreline. On the eastern side of Shag Slough, unmaintained remnant levees exist. On the western side of Shag Slough, the partially armored levee bank is utilized for informal boat launching. Limited surveys conducted in September 2021 observed that boaters primarily launch from the western bank of Shag Slough Levee, with fewer boaters crossing the Shag Slough Bridge to launch from the LIER (Attachment 2, Section 4.3.1). To improve public access for watercraft recreation, a new boat ramp will be constructed in the northeastern portion of the Project site on the north side of the northern-most breach of the Shag Slough Levee, located south of the proposed terminus of Liberty Island Road (see Figure 3).

The boat ramp will accommodate hand launching of watercraft to provide public access to the northernmost tidal channel and Shag Slough from the Shag Slough Levee. This boat ramp will also provide DWR, the California Department of Fish and Wildlife (CDFW), and public safety agencies (fire and sheriff) with a new location for motorized boat access to patrol waterways in and near the Project site, except during flood events. North of the boat ramp, a vehicle turnaround will be constructed at the terminus of Liberty Island Road, as described in the section below. A locked gate will be installed at the interface of the turnaround and the roadway leading to the boat ramp to prevent unauthorized vehicles from entry. The public will be able to walk around the gate

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Look out Slough Tidal H abitat Restoration and Flood Improvement Project Public Access Summary

¹ Woody vegetation management within the restoration area is discussed in Section 5.a.vi and Section 5.a. vii of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project Long-Term Management Plan and Wetland Reserve Plan of Operations. WRA, Inc. 2021 Draft Long-Term Management Plan and Wetland Reserve Plan of Operations for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co., LLC and Prepared on Behalf of Department of Water Resources.

² CDFW. Liberty Island Ecological Reserve website: https://wildlife.ca.gov/Lands/Places-to-Visit/Liberty-Island-ER.

to the boat ramp to hand launch their watercraft. For safety reasons, vehicular access past the gate onto the levee will not be allowed. The distance from the turnaround to the water's edge is approximately 0.1 mile or 528 feet (see Figure 3), which is a shorter distance than currently experienced by some visitors who park their vehicles near the Shag Slough Bridge (Attachment 2C) and then cross the Shag Slough Bridge to hand launch boats from the LIER, which is a distance of approximately 0.13 mile or 700 feet.³ DWR will maintain the new boat ramp as part of the overall maintenance of the Project site (see the *Operations and Maintenance* discussion below).

2.1.3 Liberty Island Road and Turnaround Areas

Currently, visitors who recreate on Shag Slough Levee, Shag Slough Bridge, and at the LIER park their vehicles on the shoulder of Liberty Island Road, which has no designated parking areas. During stakeholder outreach, Solano County indicated that parking is permissible along the shoulders of County roadways as long as there is no posted signage indicating otherwise (stating "no parking allowed"). The County has posted four signs⁴ that read "No Parking Anytime" along Liberty Island Road by the Shag Slough Bridge and one sign posted "No Parking on Bridge" on the east side of Shag Slough, on the LIER (Figure 1). In addition, Solano County Ordinance No. 521, passed in 1962, makes it unlawful for any vehicle to park at any time, "on the west side of Liberty Island Road from the Liberty Island Bridge to a point 1.5 miles north thereof" (Attachment 4A).

As part of the Project, Liberty Island Road will be improved for the segment at the northern boundary of the Project site. The Project will repave this section of Liberty Island Road and create two new paved tumaround areas off of Liberty Island Road to accommodate a safe turning radius for both large trucks such as local agricultural vehicles and vehicles towing trailers. The first turnaround area will extend from Liberty Island Road in the northwest corner of the Project site, adjacent to the new Duck Slough Setback Levee (Figure 4). The second turnaround area will extend from Liberty Island Road in the northeast corner of the Project site at the road terminus by Shag Slough Levee (Figure 3). Existing informal uses within the road right-of-way will continue on the portion of Liberty Island Road or the new turnarounds areas will be required to comply with County rules consistent with existing uses. As noted above, the turnaround located by Shag Slough Levee is located approximately 0.1 mile (or 528 feet) north of the new boat ramp.

2.1.4 Pedestrian Access and Bank Fishing

Limited surveys in September 2021 found that most (86 percent) visitors surveyed who were fishing used the western bank of Shag Slough Levee to fish (Attachment 2, Section 4.3.1). These visitors trespass on private land associated with the western bank of Shag Slough Levee to fish in Shag Slough. The remaining 14 percent of anglers surveyed crossed the Shag Slough Bridge to access the limited areas of bank fishing along approximately 1.6 miles of the LIER (see

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³ Approximate distance assessed using Google Earth Pro. Accessed December 6, 2021.

⁴ Williams G, Western Region Projects Director, Ecosystem Investment Partners, personal communication, February 3, 2021.

Attachment 2A for additional information). During an additional sampling period on October 23 and 30, 2021, a similar pattern was observed, with 78 percent of anglers observed using the western bank of Shag Slough Levee (Attachment 2, Section 4.3.1).

DWR acknowledges that the Project design will eliminate pedestrian access to portions of the Shag Slough Levee and to Shag Slough Bridge and, therefore, will eliminate pedestrians' abilities to fish on the banks of Shag Slough within the LIER. After Project completion, the Shag Slough Levee will no longer be part of the State Plan of Flood Control and accessing Shag Slough via the remnant levee and the created waterways via boat will be allowed. The Project design allows for access to bank fishing opportunities in areas considered to be of highest fishing use (west bank of Shag Slough) to the extent feasible within the confines of the Project, meeting its goals and objectives of flood risk management and special-status species habitat restoration (Attachment 3). Following Project implementation, existing users of the bank for fishing would be able to maintain those uses on the remaining Shag Slough Levee segment, spanning approximately 0.16 mile (844 feet) between the top of the Project's property line and the northernmost levee breach (see Figure 3).

2.1.5 Hunting, Fishing, and Wildlife Viewing

The Project will improve wildlife and fish populations by enhancing and creating habitat, thereby increasing the value of the area for hunting, fishing, and wildlife viewing. As covered in Attachment 3 (Section 3), Project Goals 1 and 2 are focused on increasing suitable habitat for native and rare wildlife species of the region. The Project has been designed to increase biological diversity through producing high-quality tidal and other habitat that fish and wildlife of the region depend upon.

Direct benefits of the Project include creating rearing and spawning habitats, improved food web support, and increased high-flow refugia for native fish species. The restoration of tidal wetland habitat will provide important nursery habitat for juvenile fish and the created channels, bordered by tidal wetlands, will provide foraging habitat and cover for native fishes. A key aspect of the Project is maximizing primary productivity that will extend beyond the boundaries of the Project site. The increase in primary productivity will provide food web support throughout the Cache Slough Complex leading to benefits for both fish and wildlife, both on and off the Project site.

The Delta is a critical stopover on the Pacific Flyway for migratory birds including waterfowl (e.g., geese, dabbling ducks, and diving ducks), shorebirds, raptors, and passerines. The Project will benefit these species, as restored intertidal and sub-tidal habitats will provide emergent marsh vegetation and open water for species that nest in dense marsh vegetation or over water. This habitat type will also benefit nesting rails, bitterns, marsh wrens, red-winged blackbirds, and other marsh birds. Created tidal channels will increase habitat for diving ducks, which are less likely to use the current managed wetlands due to their relatively shallow water depth. The restored intertidal wetland habitats will promote the growth of invertebrates, providing medium to high quality forage for waterfowl, shorebirds, and other migratory birds. As a result of the increase in wildlife habitat associated with the Project, the densities of and variability in wildlife will be improved as compared to existing conditions, benefiting recreational users.

2.1.6 Signage

Based on feedback during listening sessions with CDFW and Solano County Parks (Attachment 3A), the Project will now incorporate extensive wayfinding signage that will be developed and installed to convey essential information about the new recreation opportunities created by the Project (Figure 2). Signs that present an overview of Project information will be posted at both Liberty Island Road turnarounds. The signs will include a detailed site map that depicts restricted areas associated with sensitive habitats, as well as a map of the boat ramp location and tidal channels accessible to the public with mileage markers (Figures 3 and 4). This will allow users of the boat ramp to take a photo of the map prior to entering waterways. Per Solano County's recommendation (Attachment 3A), signage will guide boaters in navigating the tidal channel network within the interior of the Project site. Signs will be posted on either side of each levee breach to serve as an entryway guide to the channels and will be visible from the water level.

Additionally, per CDFW's recommendation (Attachment 3A), signs will also be posted at sensitive habitat areas to alert the public where access is not permitted. These signs will be posted in compliance with applicable California Fish and Game Code and Fisheries Agency Strategy Team requirements. Finally, signs will be posted at the entry point of the Pacific Gas & Electric Company (PG&E) access peninsulas to alert authorized personnel of the safety hazards associated with high-voltage transmission lines and the sensitive habitat restrictions of the access peninsulas.

2.2 Operation and Maintenance (O&M) of Facilities

2.2.1 Vegetation Management

To maintain public accessibility, as well as restoration goals, invasive aquatic vegetation will be managed at the Project site. DWR has an agreement with the Department of Parks and Recreation, Division of Boating and Waterways (DBW)⁵ to monitor and treat invasive vegetation at DWR's Fish Restoration Program (FRP) sites, which includes the Project site. The Project site will be monitored and maintained to minimize invasive species through the DBW's Submerged Aquatic Vegetation and Floating Aquatic Vegetation Control Programs. Monitoring and management will also occur through the Delta Region Area-wide Aquatic Weed Project (a University of California Division of Agriculture and Natural Resources program), which conducts invasive aquatic vegetation research, monitoring, and control in the Delta.

DBW surveys areas where invasive species plant control is needed at FRP sites, and DWR conducts aerial photography of all FRP restoration sites to identify vegetation composition, including invasive species infestations, before and following levee breaching. As described on pages III-47 through III-50 in Chapter III, Project Description of the Draft Environmental Impact

Look out Slough Tidal Habitat Restoration and Flood Improvement Project Public Access Summary

⁵ Standard Agreement between Department of Water Resources and Department of Parks and Recreation for the "Enhanced Control of Aquatic Invasive Plants for the Department of Water Resources Tidal Wetland Restoration Projects." Agreement Number 4600012368. Agreement Term July 1 2018 through June 30 2023.

Report (EIR)⁶ for the Project, levee maintenance and long-term management would remove and minimize upland and aquatic invasive vegetation on the Project site.

2.2.2 DWR Monitoring and Management Activities

To maintain a clean and safe site accessible to the public for recreation, routine maintenance activities will occur on the Project's levees, the interior of the Project site if needed, along shoreline areas where bank fishing may occur, and at the boat ramp. Following the completion of Project construction, RD 2098 will be responsible for maintaining the Duck Slough Setback Levee. DWR will be responsible for maintaining the Cache/Hass Slough Training Levee and the Shag Slough Levee north of the northernmost breach, where the boat ramp will be constructed. Levee O&M activities will include annual inspections and evaluations, levee restoration and damage repair, levee crown roadway maintenance and damage repair, rodent abatement and damage repair, vegetation management, levee debris cleanup, and emergency operations.

As outlined in the Project's Long-term Management Plan and Wetland Reserve Plan of Operations,⁷ DWR will be responsible for monitoring, maintaining, and managing the Project site. DWR or CDFW staff will be present at the site for these activities, which include:

- 1. Adaptive management.
- 2. Post-construction levee O&M, including annual inspections and evaluations.
- 3. Compliance monitoring, including hydrologic, invasive aquatic vegetation, special-status species habitat, and riparian planted habitat performance monitoring.
- 4. Effectiveness monitoring, including measuring indicators of ecological status and function at and near the Project site.

2.2.3 CDFW Delta-Bay Enhanced Enforcement Project Program Agreement

To maintain protected habitat, safeguard imperiled species, and ensure public safety, enforcement is a key component of public and recreational access. The Delta-Bay Enhanced Enforcement Program is an agreement between DWR and CDFW in which DWR provides funding for ten warden positions and two Wildlife Student Assistant positions that provide patrol and enforcement in the Delta, including recent habitat restoration projects (e.g., Yolo Flyway Farms, Lookout Slough, Lower Yolo Ranch). Responsibilities of the wardens under the program include the detection and apprehension of suspects taking special-status fish species; habitat protection, including detection of water pollution violations, illegal water diversion, illegal dumping, and illegal riparian habitat destruction; and targeted enforcement efforts to deter poaching and trespassing. Under this agreement, DWR's FRP sites are prioritized by CDFW wardens in their patrolling and enforcement efforts. The contract for this program is included as Attachment 4B.

Look out Slough Tidal H abitat Restoration and Flood Improvement Project Public Access Summary

⁶ WRA, Inc. 2019. Draft Environmental Impact Report for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co, LLC. Lead Agency: California Department of Water Resources.

⁷ WRA, Inc. 2021 Draft Long-Term Management Plan and Wetland Reserve Plan of Operations for the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project. Prepared for EIP III Credit Co., LLC and Prepared on Behalf of Department of Water Resources.



Figure 1: Project Site Existing Conditions

*Sign locations are approximate for illustration purposes only.





Lookout Slough Tidal Habitat Restoration and Flood Improvement Project



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- Project Information
- Access Road Restrictions
- **Navigating Waterways**
- Sensitive Habitat Areas

Figure 2: Proposed Project Conditions

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project



Cross Levee

Ecosystem Investment

Partners

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Figure 3: Proposed Project Turnaround and Boat Ramp

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project







Prepared by:

Map Prepared Date: 12/6/2021 Map Prepared By: njander Base Source: Wood Rogers Base Date: 10/24/17 Data Source(s): WRA



ENVIRONMENTAL CONSULTANTS

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Liberty Island Road

Turnaround

Vehicular Gates Duck Slough Setback Levee

Proposed Gate Location

Proposed Gate Location
 Tidal Marsh Areas
 Open Water
 Duck Slough Setback
 Levee

Posted Sign Category

- Project Information
- Sensitive Habitat Areas

Figure 4: Proposed Project Turnaround

*Depiction of exact sign and gate location for illustration purposes only and exact locations to be determined.

Lookout Slough Tidal Habitat Restoration and Flood Improvement Project







Prepared by:

Map Prepared Date: 12/6/2021 Map Prepared By: njander Base Source: Wood Rogers Base Date: 10/24/17 Data Source(s): WRA



ENVIRONMENTAL CONSULTANTS

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Appendix C Contra Costa County Superior Court Peremptory Writ of Mandate and Judgment Granting the Petition for Writ of Mandate

- C-1 Peremptory Writ of Mandate
- C-2 Judgment Granting the Petition for Writ of Mandate

C-1 Peremptory Writ of Mandate

		FILED	
1		JAN - 5 2023	
2		K. BIEKER CLERK OF THE CLERK	
3		COUNTY OF CONTRA COSTA	
4		C. FORFANG DEPUTY CLERK	
5 6			
7	SUPERIOR COURT OF THE STATE OF CALIFORNIA		
8	COUNTY OF CONTRA COSTA		
9		Case No. MSN21 0558	
10	CITY OF VALLEJO,	Case No. MISINZI-0558	
11	Petitioner,	MSN21-0559; MSN21-0560; and MSN21-0561]	
12	V.	(CEQA Claim: Petition for Writ of Mandate)	
13	CALIFORNIA DEPARTMENT OF WATER RESOURCES, et al.,		
14	Respondents,	PEREMPTORY WRIT OF MANDATE	
15	ECOSYSTEM INVESTMENT PARTNERS	Merits Hearing Date: October 11, 2022	
16	Real Party in Interest.	Time: 9:00 a.m. Judge: Honorable Edward G. Weil	
17		Dept: 39	
18			
19	AND CONSOLIDATED ACTIONS.		
20		I	
21	TO RESPONDENT THE CALIFORNIA DEPAR	TMENT OF WATER RESOURCES:	
22	Judgment having been entered in this proceeding ordering that a Peremptory Writ of		
23	Mandate issue from this Court, this Court comman	ids as follows:	
24	1. The California Department of Water Resources ("Respondent") shall decertify that		
25	portion of the Final Environmental Impact Report	("FEIR") for the Lookout Slough Tidal Habitat	
26	Restoration and Flood Improvement Project ("Proj	ect") prepared pursuant to the California	
27	Environmental Quality Act ("CEQA") (Pub. Resources Code, § 21000 et seq.) regarding the		
28			
		Peremptory Writ of Mandate (MSN21-0558)	
	11		

Project's potential impact on recreational opportunities to fish from the shoreline (the "Shoreline
 Fishing Opportunities Threshold"). The certification of the FEIR as to the Shoreline Fishing
 Opportunities Threshold is remanded to Respondent for further action consistent with the Judgment.

On or before sixty (60) days after entry of this Peremptory Writ of Mandate,
 Respondent shall by way of INITIAL RETURN report to the Court the steps Respondent has or is
 in the process of taking to comply with this Peremptory Writ of Mandate and this Court's Ruling on
 the Statement of Decision, filed November 18, 2022.

8 3. Within ninety (90) days of its INITIAL RETURN or such additional time as
9 Respondent may request and this Court may approve after notice to and an opportunity to respond
10 by Petitioners, Respondent shall file with the Court a FINAL RETURN to this Peremptory Writ of
11 Mandate.

12 4. Except as provided herein, this Peremptory Writ of Mandate shall not limit or control13 in any way the discretion legally vested in Respondent.

14 5. This Court shall retain jurisdiction over this proceeding until Respondent files a
15 FINAL RETURN demonstrating compliance with this Peremptory Writ of Mandate and this Court
16 issues an Order discharging this Peremptory Writ of Mandate in full.

17 18	Dated: JAN - 5 2023
19	C. FORFANG
20	SEAT OF CONTRACTS
21	
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25	
26	
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28	
	- 2 -
	Peremptory Writ of Mandate (MSN21-0558

CV - Martinez-Wakefield Taylor Courthouse 725 Court Street Martinez CA 94553 925-608-1000 <u>www.cc-courts.org</u>



K. Bieker Court Executive Officer

CLERK'S CERTIFICATE OF MAILING				
CASE NAME: CITY OF VALLEJO VS CA DEPT OF WATER RESOURCES	CASE NUMBER: MSN21-0558			
THIS NOTICE/DOCUMENT HAS BEEN SENT TO THE FOLLOWING ATTORNEYS/PARTIES:				
JEANNE M ZOLEZZI				
5757 PACIFIC AVE., STE. 222				
STOCKTON, CA 95207				
MATTHEW G BULLOCK				
455 GOLDEN GATE AVE., STE. 11000				
SAN FRANCISCO, CA 94102				
G BRAIDEN CHADWICK				
3001 LAVA RIDGE CT., STE. 120				
RUSEVILLE, CA 95001				
OSHA R MESERVE				
510- 8TH ST.				
SACRAMENTO, CA 95814				
COREY M MOFFAT				
455 GOLDEN GATE AVE., STE. 11000				
SAN FRANCISCO, CA 94102				
KATHRYN L OEHLSCHLAGER				
455 MARKET ST., STE. 1500				
SAN FRANCISCO, CA 94105				
RANDY J RISNER				
555 SANTA CLARA ST., 3RD FLOOR				

Superior Court of California, Contra Costa County

CV - Martinez-Wakefield Taylor Courthouse 725 Court Street Martinez CA 94553 925-608-1000 <u>www.cc-courts.org</u>



K. Bieker Court Executive Officer

SUPERIOR COURT OF CALIFORNIA, CONTRA COSTA COUNTY

I DECLARE UNDER PENALTY OF PERJURY THAT I AM NOT A PARTY TO THE WITHIN ACTION OR PROCEEDING; THAT ON THE DATE BELOW INDICATED, I SERVED A COPY OF THE PEREMPTORY WRIT OF MANDATE BY DEPOSITING SAID COPY ENCLOSED IN A SEALED ENVELOPE WITH POSTAGE THEREON FULLY PREPAID IN THE UNITED STATES MAIL AT MARTINEZ, CA AS INDICATED ABOVE TO ALL ACTIVE AND DISPOSITIONED PARTIES.

DATE: 1/5/2023

BY: C. FORFANG , DEPUTY CLERK

C-2 Judgment Granting the Petition for Writ of Mandate

		FILED	
1		1AN 5 2022	
2	JAN - J ZUZJ		
3		SUPERIOR COURT OF CALIFORNIA COUNTY OF CONTRA COSTA	
4		BY	
5		C. FORFANGE DEPUTY CLERK	
6			
7	SUPERIOR COURT OF THE STATE OF CALIFORNIA		
8	COUNTY OF CONTRA COSTA		
9		Case No. MSN21-0558	
10	CITY OF VALLEJO,	[Consolidated with Case Nos.	
11	Petitioner,	MSN21-0559; MSN21-0560; and MSN21-0561]	
12	v.	(CEOA Claim: Petition for Writ of Mandate)	
13	CALIFORNIA DEPARTMENT OF WATER		
14	Resources, et al.,	JUDGMENT GRANTING PETITION FOR WRIT OF MANDATE	
15	ECOSYSTEM INVESTMENT DADTNEDS		
16	ECOSTSTEM INVESTMENT FARTNERS	Merits Hearing Date: October 11, 2022 Time: 9:00 a m	
17	Real Party in Interest.	Judge: Honorable Edward G. Weil Dept: 39	
18			
19	AND CONSOLIDATED ACTIONS		
20			
21	The petitions for writ of mandate by City of Vallejo, Reclamation District No. 2060,		
22	Reclamation District No. 2068, Central Delta Water Agency, and Solano County Water Agency		
23	(collectively, Petitioners) came on regularly for hearing on October 11, 2022, the Honorable		
24	Edward G. Weil presiding. At the hearing, Randy Risner represented City of Vallejo, Kathryn		
25	Oehlschlager represented Reclamation District No	. 2060 and Reclamation District No. 2068,	
26	Osha Meserve represented Central Delta Water Ag	gency, and Jeanne Zolezzi and Lilliana Selke	
27	represented Solano County Water Agency. Deputy Attorney Generals Corey Moffat and David		
28			

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Meeker represented respondent California Department of Water Resources (Respondent). G. Braiden Chadwick represented real party in interest Ecosystem Investment Partners, LLC.

The Court, having reviewed the parties' briefs, considered the arguments of counsel, and the administrative record before it in this matter, entered its Statement of Decision on November 17, 2022, which is attached as attachment 1.

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It is ORDERED, ADJUDGED AND DECREED as follows:

Judgment is entered in favor of Petitioners and against Respondent on the Petitions
 for Writ of Mandate, for the reasons set forth in the November 18, 2022 Statement of Decision.
 Petitioners' claim that Respondent violated CEQA is granted as to the EIR's failure to adequately
 disclose, analyze and/or mitigate the project's potentially significant impact on recreational
 opportunities to fish from the shoreline. A Peremptory Writ of Mandate shall issue from the Court
 ordering Respondent to partially set aside its certification of the EIR on this ground.

2. The Writ shall also command Respondent to make and file a return within 60 days
 after issuance of the Writ, demonstrating what actions Respondent has taken, or is in the process
 of taking, in order to comply with and satisfy the mandates of the Writ. The Court shall retain
 jurisdiction until the Court has determined the Respondent has complied with CEQA.

3. The Court requested supplemental briefing on whether full or partial de-certification
of the E1R is appropriate in this case. The Court has reviewed the parties' supplemental briefs
addressing this issue and the administrative record, and finds as follows:

20 Respondents cannot alter access to shoreline fishing until it has complied with (i) 21 CEQA. In order to maintain the status quo, no physical work can be performed on 22 the Shag Slough Levee, Liberty Island Road and the Shag Slough Bridge until 23 further order of this Court as those areas provide access to shoreline fishing. (LOS 24 1087, 1110, 1377-78.) The Project includes work on a number of areas that are 25 separate from the Shag Slough Levee, Liberty Island Road and the Shag Slough 26 Bridge. (LOS 1101-1102, 1121.) Thus, Respondent's findings and approval related 27 to Project activities affecting shoreline fishing are severable from other project 28 activities;

1	(ii) severance will not prejudice complete and full compliance with CEQA because		
2	Respondent will consider the information required by CEQA before project		
3	activities will be permitted on areas that will affect shoreline fishing; and		
4	(iii) as explained in the Court's Statement of Decision, the remainder of the Project is		
5	compliant with CEQA.		
6	Therefore, the Court finds that partial de-certification is appropriate in this case pursuant to Public		
7	Resources Code section 21168.9(b). Only project activities potentially resulting in impacts to		
8	recreational opportunities to fish from the shoreline shall be suspended until the Court has		
9	determined that Respondent has complied with CEQA.		
10	4. All of Petitioners' remaining causes of action alleging other violations of CEQA are		
11	dismissed.		
12	5. Without commenting on the merits of a claim of fees or costs, the Court reserves		
13	jurisdiction over those issues pursuant to the applicable provisions of the Code of Civil		
14	Procedure.		
15	IT IS SO ORDERED.		
16	Dated 1/5 2022 Ex(()/		
17	Honorable Edward G. Weil		
18	Judge of the Superior Court		
19			
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Appendix D Contra Costa County Superior Court Statement of Decision

THE SUPERIOR COURT OF THE STATE OF CALIFORNIA IN AND FOR THE COUNTY OF CONTRA COSTA

DATE: November 17, 2022 JUDGE: Edward G. Weil DEPARTMENT: 39 CLERK: Denese Johnson UNREPORTED

CITY OF VALLEJO, Petitioner(s),

vs.

STATE OF CALIFORNIA STATE DEPARTMENT OF WATER RESOURCES, Respondent(s). Case No.: MSN21-0558 (MSN21-0559, MSN21-0560, MSN21-0561)

STATEMENT OF DECISION

The Court heard oral argument in this case on October 11, 2022 and then took the matter under submission. After considering all documents filed in this case, along with oral argument, the Court rules as follows:

I. Background

This is a CEQA case involving challenges to a tidal restoration project in Lookout Slough in the Delta. The Project would convert 3,164 acres of agricultural land into tidal marsh by breaching an existing levee and constructing and improving other levees. The Project will help satisfy the Department's obligations to restore approximately 8,000 acres of tidal marsh as required by the United States Fish and Wildlife Service's 2008 Delta Smelt Biological Opinion (BiOp) and will be consistent with RPA I.6.1 of the 2009 National Marine Fisheries Service Salmonid BiOp. The Project is designed to create habitat for Delta Smelt, longfin Smelt, Steelhead, Sacramento Splittail, Chinook salmon, giant garter snake, and other species. The Project would also widen a portion of the Yolo Bypass to increase flood storage and conveyance, increase the resilience of levees, and reduce flood risk.

Respondent, the State of California State Department of Water Resources (the Department) certified the FEIR for the Project on November 2, 2020. Four petitions were filed challenging the certification of the FEIR. The petitions were consolidated. All Petitioners filed joint opening and reply briefs and Respondents and Real Party filed a joint opposition brief.

The Petitioners are City of Vallejo (MSN21-0558), Central Delta Water Agency (MSN21-0560), Reclamation District No. 2060 and Reclamation District No. 2068 (MSN21-0559) and Solano County Water Agency, Inc. (MSN21-0561). Ecosystem Investment Partners, LLC was named as the real party of interest in two of the cases (MSN21-0560 and MSN21-0559).

II. Standard of Review

Under CEQA, the Court's role is to determine whether the agency has prejudicially abused its discretion, which means that it "has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." (Pub. Res. Code, § 21168.5.) A review of whether correct procedures were followed is de novo, while the substantive factual conclusions are given deference. (*Ebbetts Pass Forest Watch v. Cal. Dep't of Forestry & Fire Prot.* (2008) 43 Cal.4th 936, 944.) An agency's decision to certify an EIR is presumed correct. (*San Diego Citizenry Group v. Cty. Of San Diego* (2013) 219 Cal.App.4th 1, 11.)

"The substantial evidence standard is applied to conclusions, findings and determinations. It also applies to challenges to the scope of an EIR's analysis of a topic, the methodology used for studying an impact and the reliability or accuracy of the data upon which the EIR relied because these types of challenges involve factual questions. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1198.) It also applies "to factual dispute(s) over whether adverse effects have been mitigated or could be better mitigated." (*Oakland Heritage Alliance v. City of Oakland* (2001) 195 Cal.App.4th 884, 898 [internal quotations and citations omitted].) According to the CEQA Guidelines, substantial evidence is "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines, § 15384.)

On the other hand, whether an EIR "is insufficient because it lacks analysis ... is not a substantial evidence question." (*Sierra Club v. Fresno County* (2018) 6 Cal.5th 502, 514-515.) "The ultimate inquiry, as case law and the CEQA guidelines make clear, is whether the EIR includes enough detail 'to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.' [Citations.] The inquiry presents a mixed question of law and fact. As such, it is generally subject to independent review. However, underlying factual determinations—including, for example, an agency's decision as to which methodologies to employ for analyzing an environmental effect—may warrant deference. [Citations.] Thus, to the extent a mixed question requires a determination whether statutory criteria were satisfied, de novo review is appropriate; but to the extent factual questions predominate, a more deferential standard is warranted. [Citations.]" (*Id. at* 515-517.) "Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." (*Ibid.*)

An EIR must include an analysis of significant environmental impacts that will result from the project in both the short term and the long term. (CEQA Guidelines § 15126.2(a).) In addition, an EIR must analyze certain indirect impacts. " 'In evaluating the significance of the environmental effect of a project, the lead agency shall consider ... reasonably foreseeable indirect physical changes in the environment which may be caused by the project.' (CEQA Guidelines, § 15064, subd. (d).) 'An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. ...' (CEQA Guidelines, § 15064, subd. (d)(2).) 'An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.' (CEQA Guidelines, § 15064, subd. (d)(3).)" (*City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 478-479.)

III. CEQA Claims

A. Recirculation of the EIR

Petitioners argue that the FEIR contained significant new information and consequently, the Department was required to recirculate.

"[R]ecirculation is required, for example, when the new information added to an EIR discloses: (1) a new substantial environmental impact resulting from the project or from a new mitigation measure proposed to be implemented [citation]; (2) a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance [citation]; (3) a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which the project's proponents decline to adopt [citation]; or (4) that the draft EIR was so fundamentally and basically inadequate and conclusory in nature that public comment on the draft was in effect meaningless [citation]."(Laurel Heights Improvement Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1129-1130 (Laurel Heights II); see also CEQA Guidelines, §15088.5.) A determination whether new information is significant so as to warrant recirculation is reviewed only for support by substantial evidence. (Laurel Heights II, supra, 6 Cal.4th at 1335.)

"Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." (CEQA Guidelines, §15088.5(b); see also, *Laurel Heights II, supra*, 6 Cal.4th at 1129.)

1. New information

Petitioners argue that recirculation is required because the FEIR included a number of new changes. In support of this argument, Petitioners argue that the FEIR is too large because it is 912 pages. Petitioners point out that the CEQA Guidelines state a draft EIR should normally not exceed 150 pages. (CEQA Guidelines, § 15141.) That section states that proposals of unusual scope or complexity should normally be less than 300 pages and applies to *draft* EIRs. (*Ibid*.)

Respondent and Real Party point out that the size of the FEIR is in large part due to the comment letters and responses to those letters, which amount to 628 pages in the FEIR. They also point out that another 248 pages of the FEIR are new appendices requested by the Petitioners. Finally, they point out that there are 27 pages of actual changes to the DEIR. (LOS 104-130.)

Petitioners' reliance on suggested page limits for the DEIR does not convince this Court that the FEIR should be recirculated. In addition, many of the pages included in the FEIR are due to comment letters and responses, including many from the Petitioners.

2. Changes to mitigation measures

Petitioners argue that the FEIR significantly changed nearly twenty mitigation measures and thus recirculation is required. Petitioners string-cite the mitigation measures that were changed in the FEIR, but do not discuss most of these measures. Petitioners focus on mitigation measure AIR-1, which is designed to mitigate emissions during construction. (LOS 118-120.) Petitioners quote the changes in the FEIR, but do not explain how these changes to AIR-1 are significant.

Petitioners also point out that CULT-1A and CULT-1B are new mitigation measures. They do not explain, however, why adding these mitigation measures results in significant new information. CULT-1A is a new mitigation measure that requires cultural sensitivity training prior to construction. (LOS 127-128.) Petitioners do not explain how this mitigation measure constitutes significant new information. CULT-1B is not a new mitigation measure but a change in the name of the measure only. (LOS 128.)

The changes to AIR-1 do not appear to be significant and the Court finds that Petitioners have not met their burden of showing that changes to AIR-1, CULT-1A and CULT-1B or the other undiscussed mitigation measures constitute significant new information.

3. Changes to hydrology modeling

Petitioners argue that the inclusion of Appendix X in the FEIR constitutes significant new information. In the DEIR, Appendix S provided analysis of salinity levels. (LOS 5399-5406.) Several comments raised questions about the modeling in Appendix S and in response the FEIR included Appendix X. Appendix X includes a more detailed modeling of salinity and bromide levels. (LOS 769-1000.) The FEIR states that the modeling in Appendix X did "not change the conclusions of less than significant for salinity impacts on drinking water, agriculture, and fish and wildlife that were made in the Draft EIR." (LOS 134.)

Petitioners argue that Appendix X identified significant new information because it showed increases in salinity that were greater than Appendix S and up to 5.5% at one intake station (C19). Petitioners have not shown, however, that this previously undisclosed increase in salinity has a significant impact on water quality. The DEIR and the FEIR both concluded that the Project would have a less than significant impact on water quality. The FEIR specifically notes the salinity levels of 5.5%, but concludes it would not violate the threshold of significance, D-1641, and thus would have a less than significant impact on water quality. As discussed in more detail below, Petitioners have not shown that this analysis was not supported by substantial evidence.

The Court finds that here, as in *Laurel Heights II*, Appendix X is a new study that serves "to amplify, at the public's request, the information found in the draft EIR." (*Laurel Heights II, supra*, 6 Cal.4th at 1137.) Appendix X is not significant new information that requires recirculation of the FEIR.

B. Analysis of the Projects Impacts on the Environment

- 1. Agricultural Resources
 - a. D-1641 Standard

Petitioners argue that the EIR's decision to use State Water Resources Control Board's Water Rights Decision D-1641 (D-1641) as the threshold of significance for salinity levels was an error.

Appendix S to the DEIR explains the decision to use D-1641. Appendix S explains that under the CEQA Guidelines, Appendix G, the most important significance criteria are "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." (LOS 5402.) The Department "has recently analyzed the impacts of tidal wetland restoration projects on salinity (e.g., Prospect Island, Winter Island, Decker Island)" and used a threshold of significance as "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)." (LOS 5402-03.) Appendix S explains that D-1641 "is part of SWRCB's implementation of the 1995 Bay-Delta Water Quality Control Plan (Bay-Delta Plan) and is considered the relevant water quality standard to assess salinity impacts." (LOS 5403, fn.2.)

Petitioners argue that the FEIR failed to acknowledge that the SWRCB may issue temporary urgency change petitions, allowing standards to be waived or modified. (Water Code §1435.) Furthermore, Petitioners argue that the FEIR does not acknowledge that when a change petition is issued, the Project would be more likely to have a significant adverse impact on agriculture due to high salinity in irrigation water. Petitioners have not cited any evidence or otherwise sufficiently explained when temporary urgency change petitions may be issued.

Petitioners also argue that it is not clear how compliance with D-1641 will occur and that the FEIR did not analyze what will happen to salinity levels when the Department is required to release storage water in order to comply with D-1641. Petitioner points to letters from the Central Delta Water Agency for this issue. (LOS 5560, see also 250-251; LOS 6803, 6808.) As explained in the FEIR, the modeling (appendices S and X) did not indicate any instances of non-compliance with D-1641. (LOS 137.)

Petitioners have not provided substantial evidence that explains why the reliance on D-1641 is improper. Instead, the Court finds that the DEIR and FEIR sufficiently explain why D-1641 can be used as a threshold of significance. (LOS 137, 5402-5403, 1334.)

b. Cumulative impact of salt accumulation in soils

The EIR found that salinity levels in the delta would increase slightly due to the Project, but that the levels would not exceed the D-1641 standard and therefore would have a less than significant effect on the environment. Petitioners argue that the EIR failed to consider whether this increase in salinity would have an impact on salinity levels in soil over time.

The question here is whether the discussion of the Project's impact on soil was sufficient. Respondent's decision to use the D-1641 standard as a threshold of significance and its determination that the Project would not exceed the D-1641 standard are subject to review by this Court under the substantial evidence standard.

The DEIR explained that the D-1641 standard includes agricultural beneficial uses and that the salinity level modeling included two agricultural stations (D15 and D22). (LOS 1343.) The DEIR found that the Project would not exceed the applicable threshold of significance related to agriculture from increased salinity levels postconstruction operation and thus, the environmental impact on agriculture due to salinity levels in the Delta would be less than significant. (LOS 1343.)

The FEIR included one paragraph on the possibility of salinity building up in the soil that will damage crops. The FEIR stated that the modeling for the Project indicates no change in compliance with D-1641 electric conductivity standards. (Electric conductivity is a method used to measure salinity.) The FEIR concludes the section by explaining that "[i]n addition to the salinity of the diverted water, salinity build-up in soils is also a function of water management (e.g., timing of diversions during low tides) and soil characteristics of a particular site, which is not related to the Proposed Project." (LOS 141.)

Petitioners include a statement from an expert, Michelle Leinfelder-Miles, on salinity's effect on agriculture, which was provided in another case. (LOS 389-398.) The expert explained that "[i]rrigation water salinity influences soil salinity because irrigation water carries salts, and when it is applied to fields, salts are added to the soil. Salts accumulate in the soil at higher concentrations than they existed in the irrigation water because evaporation and plant uptake extract water from the soil leaving the salts behind." (LOS 393.) Different crops have different salinity threshold levels and there is information available on the reduction in crop yields based on various soil salinity levels. (LOS 393-394.) The expert also disagrees with the statement that "a change in water quality that is less than 5% is not an impact" and explains that "even a small change in water salinity could reduce yield if that change resulted in an increase in soil salinity that exceeded the crop tolerance threshold." (LOS 394.)

Petitioners' evidence shows that an increase in the salinity level in irrigation water can have a negative impact on crop yields due to the accumulation of salt in the soils. But whether higher salinity levels in the Delta will result in increased salinity levels in the soil is based on numerous factors. (LOS 393.) Petitioners' expert provides a general statement that even small changes in water salinity can reduce crop yield. Yet, the expert's statements are pulled from another case and do not address anything specific about this Project or the Project site. Furthermore, the expert does not address the D-1641 standard and thus, has not shown that D-1641 is an improper threshold of significance to determine impacts on agriculture.

The Court finds that Petitioners have not met their burden of showing that the EIR's analysis of the Project's impact on agriculture due to increased salinity levels was inadequate.

c. Williamson Act Contracts

The FEIR states that the Project does not violate the Williamson Act and notes that the covered properties each allow for use as open space. (LOS 329-330.) The FEIR notes that the three Williamson Act contracts here were entered into in 1970, 1979 and

1984 and each contract includes open space as a compatible use. (LOS330; see also, Respondent's RJN ex. A, B, C.)

Petitioners argue that the Project violates the Williamson Act because tidal habitat is not an approved use under the Williamson Act contracts. There are three properties in the Project Site with Williamson Act Contracts: Bowlsbey, Liberty Farms and Vogel. (LOS1166). The Solano County Williamson Act guidelines do not define open space to include tidal habitat. (Petitioners' ex. A p.12.)

For contracts that were signed prior to June 7, 1994, the compatible uses are those that are defined by this chapter at the time that Williamson Act contract. (Gov. Code, § 51238.3(c)(1).) Under the Williamson Act, "open-space" is a compatible use and "open-space" includes "habitat for wildlife". (Gov. Code, § 51201(e), (o).) At the time the three contracts were entered into, "open-space" included "essential habitat for wildlife." The parties do not discuss the removal of the word "essential". This Project is being used to fulfill tidal restoration requirements set by the U.S. Fish and Wildlife Service and appears to create essential habitat for wildlife.

The Court finds that the FEIR correctly concluded that the Project does not violate the Williamson Act.

- 2. Municipal Impacts
 - a. Salinity and Bromide

The DEIR provided a somewhat limited analysis of the salinity and bromide impacts on water quality. (LOS 1342, 5399-5406.) The FEIR, however, provided a more detailed analysis of those impacts, especially in Appendix X. (LOS 769-1000.)

Petitioners argue that under the modeling in Appendix X, the City of Vallejo's water intake station would exceed 5% salinity and that the EIR did not properly analyze this impact. High salinity levels can have a negative impact on drinking water quality by impacting water treatment operations. (LO5 1342.)

Appendix X shows salinity levels about 5% for Cache Slough (C19) intake for July, August and September 2009 and August 2010. (LOS 849, 856.) The salinity levels did not go above 5% for C19 in 2016. (LOS 863.) Appendix X noted that the "Largest percent EC increases due to Lookout Slough restoration occur... during the fall and summer at C19 (as much as 5.5% / 5.4%)." (LOS 773; see also 932.) The FEIR discusses the salinity increase at C19, "The Proposed Project is predicted to cause increased EC at compliance station CI9 of up to 5.5% for about six months per year; however, this increase would not cause non-compliance with D-1641". (LOS 138-139.) The FEIR also explains that Vallejo does not currently use C19 for water intake, but instead uses the Baker Slough Pumping Plant. (LOS 138.) Appendix X predicts that the Project will decrease salinity levels at the Baker Slough Pumping Plant. (LOS 849, 856, 863.)

Petitioners also argue that the DEIR failed to provide sufficient modeling for bromide. Bromide is a concern for water quality because "[w]hen municipal water supplies are treated (particularly with ozone) to meet drinking water standards, Bromide can form Bromate, a known and regulated carcinogen, which can impact human health." (LOS 360.) Most of the North Bay Aqueduct water purveyors utilize ozone and would be highly sensitive to changes in bromide above baseline conditions. (LOS 360, 5653.)

Appendix X in the FEIR also provided a more detailed analysis of increases of bromide. The FEIR shows that the Project is predicted to change bromide levels by 2 to 4% for most areas and by 8% for C19. The FEIR again points out that C19 is not used for intake water and that bromide levels are expected to decrease at the Baker Slough Pumping Plant, which is used by Vallejo. (LOS 142.)

Petitioners argue that the increases in salinity and bromide are significant, however, they do not cite to evidence in the record to show that the anticipated levels of salinity or bromide would be a significant impact. Furthermore, assuming that salinity above 5% is problematic, Petitioners do not explain why the Project will have a significant impact on water quality if no one is currently taking water from site C19. The FEIR considered the increases in salinity and bromide and, based on substantial evidence, found them to be less than significant. That is all that CEQA requires here.

b. Organic Carbon

The DEIR did not discuss the Project's impact on organic carbons and their effect in drinking water. The FEIR addressed this point with a Master Response 8. (LOS 152-154.) Dissolved organic carbons (DOC) are part of the ecosystem in the Delta, but are a potential concern for drinking water because DOC can contribute to the formation of disinfection byproducts (DBPs), which are regulated constituents of drinking water. (LOS 152.)

Petitioners argue that the FEIR discussion on organic carbons was insufficient, pointing to the following sentence "The Draft EIR did not include an analysis of the Proposed Project effect on DOC because there is no regulatory standard to form a significant threshold to determine effects on DOC levels." (LOS 154.) Petitioners argue that CEQA requires the Department to prepare a good faith response to the comments regarding organic carbon or formulate a non-regulatory threshold of significance. (Petitioners' Brief p. 21.) Petitioners fail to address the remainder of that paragraph, which states that "because several comments were raised regarding DOC, DWR reconsidered the issue based on the above information." (LOS 154.)

Petitioners also failed to explain why Master Response 8 was an insufficient response to the comments on organic carbon. (LOS 152-154.) Master Response 8 explains that there is no regulatory threshold for dissolved organic carbons and the current scientific understanding is insufficient to make accurate predictions of the Project's impact on DOC. (LOS 153.) The FEIR discussed an accidental levee breach at Liberty Island that resulted in the creation of tidal wetlands from 1998 to 2010. During this time, DOC levels at the North Bay Aqueduct intake stayed the same or slightly decreased. (LOS 153.) The FEIR also noted that modelling found that the water at and near the Project Site would have residence times of a week or more. A study at Shag Slough found that longer residence times resulted in additional environmental processing of DOC which resulted in a lower potential to form DBPs. (LOS 153.) The Court finds that the analysis of the Project's impact on dissolved organic carbons is based on substantial evidence and complies with CEQA.

c. Water Diversions

Petitioners argue that the Project will have negative impacts on their water diversions. The Project may result in increases in non-native plant species like water hyacinth or water primrose. Water hyacinth has been increasing in the Delta from 2004 to 2014. (LOS 322.) Petitioners are also concerned the Project's plan for natural recruitment of other plants will take years or decades and may be unsuccessful due to the invasive plant species. (LOS 335; see also LOS 5638.) Petitioners argue that the non-native plants will increase the cost of Petitioners' maintenance at their diversion points.

Respondent and Real Party point out that the DEIR considered the impact of invasive plant species and included appropriate mitigation measures, including BIO-4. (LOS 1244; see also 159-160.) The FEIR made clear that the monitoring and removal of invasive plant species would occur after construction. (LOS 122.) The FEIR found that it is expected that the Project will reduce overall cover of invasive species. (LOS 159.)

As discussed below, BIO-4 is a proper mitigation measure. Thus, the FEIR has provided sufficient analysis for its conclusion that there would not be an increase in invasive species, which negates Petitioners' concerns about increased maintenance costs due to increased invasive species.

Petitioners also argue that the Project is designed to increase the numbers of listed and endangered fish species, which will adversely impact the ability of municipal and agricultural water users to divert water. Petitioners explained that "[i]f the Project is successful the number of endangered fish species will increase in the vicinity of the District's diversion intakes and drainage outlets. An increased population of endangered species in the project area would cause increased regulatory restrictions and costs for the District to comply with environmental requirements." (LOS 729.) This concern is echoed in the comment letters. One comment letter noted that "the DEIR does not analyze how the Project would make fish vulnerable to take via entrainment at longstanding water diversion facilities operated by other agencies, and whether this result in a need to relocate water facilities." (LOS 307.)

Appendix E of the DEIR notes that the Project is intended to provide suitable habitat for Delta Smelt and other special-status fish species and "this may result in a local increase in abundance within the Proposed Project Site and adjacent waterways." (LOS 2713.) The DEIR found this was not an adverse environmental effect. The DEIR also stated that the "Project does have the potential to indirectly affect nearby agricultural lands through the increase in the abundance of protected fish species that could be entrained by local water diversions including Delta smelt, green sturgeon, Chinook salmon, and other salmonids." (LOS 2713.)

The FEIR stated that an increase in the numbers of listed fish is not an adverse environmental impact that must be analyzed and mitigated. (LOS 146.) The FEIR goes on to discuss whether the water diversions will have a negative impact on the listed fish species. (LOS 146-147.) The FEIR notes that the California Department of Fish and Wildlife can require that screens be added to diversions to protect listed fish from entrainment, but does not require screens as a mitigation measure. (LOS 147.) The FEIR noted that "[s]ome of the comments raised the question of whether diverters might be required to move their diversions to protect listed fish species. As far as DWR is aware, this is an action that has not been proposed by any regulatory agency and is not considered an environmental effect of the Proposed Project that must be considered for mitigation." (LOS 147.)

Whether Petitioners will have to move their water diversion facilities or add screens to protect from fish entrainment are potential indirect physical impacts. Thus, the Court's analysis is whether Petitioners' concerns that they will have to move their water diversion facilities or add screens are reasonably foreseeable impacts caused by the Project or whether their concerns are speculative or unlikely to occur. (See, *City of Long Beach, supra,* 19 Cal.App.5th at 478-479.) The Project is likely to increase the populations of native fish, but the record does not show that adding screens or moving the facilities are reasonably foreseeable outcomes from the Project. Instead, these concerns are too speculative.

3. Biological Resources

a.Fish Predation Impact

Petitioners argue that the EIR improperly found that the Project's effect on nonnative fish would have a less than significant impact on special-status fish species.

The DEIR states that non-native fish are expected to occur in the new habitat created by the Project and would have the opportunity to prey on native fish. (LOS 1272.) The DEIR goes on to explain, however, that the new / restored habitat will

benefit juvenile salmonids and other native fish. The increase in wetland habitat and high food productivity provided by the Project is expected to benefit the growth rates and body size of fish. When native fish are faster or larger than predators, the potential for predation by piscivorous fish is reduced. (LOS 1273.) The DEIR cited to several studies and articles that were provided in the record. (LOS 16461 (The Floor Pulse Concept in River-Floodplain Systems); 16498 (Fish Swimming Stride by Stride); 16582 (Size-Dependent Predation in Piscivores); 17548 (Shallow-Water Piscivore-Prey Dynamics in California's Sacramento-San Joaquin Delta); 17568 (Patterns in the Use of a Restored California Floodplain by Native and Alien Fishes); the Court was unable to locate the article cited in footnote 37 at LOS 1273.)

The DEIR concludes that the Project is designed to provide beneficial effects to native fish while minimizing opportunities for non-native species establishment. Predatory birds using sheetpile perches are the most likely to cause an impact on special-status fish. The DEIR concludes that any impact will be less than significant because natural perches already exist in the area and there will be construction disturbances that are likely to flush birds away. (LOS 1273.)

Petitioners argue that the less than significant finding is not supported by the evidence. Petitioners point to a 2011 article by Natural Resource Scientists that discusses earlier studies about fish in the Delta. (LOS 285-290; 5580-5585.) The 2011 article raises concerns about non-native predatory fish and their effects on native fish in the Delta.

The conclusion that the Project will have a less than significant impact on native fish is supported by substantial evidence. Petitioners' citation to one article providing a contradictory conclusion is insufficient to change this conclusion.

b. Delta Smelt Impacts

Petitioners argue that the Project will have negative impact on delta smelt because it will allow growth of invasive water hyacinth. Petitioners also argue that the mitigation measures related to water hyacinth and sand for spawning are not sufficient to reduce the impact on delta smelt to less than significant.

The DEIR found that with mitigation measures, the Project would have a less than significant impact on special-status fish species, which includes delta smelt. (LOS 1268.)

Petitioners argue that water hyacinth is a major invasive species, having increased from 1.3 to 10.6% of the area of the Delta from 2004 to 2014. (LOS 322; see also 5624 [the information regarding water hyacinth in the Downy Brand letter comes

from an article not included in the record].) According to Petitioners, water hyacinth has a negative impact on water quality and the Project will create more habitat suitable for water hyacinth, which is an impact that should be considered.

The DEIR identified water hyacinth as an invasive plant species requiring long term management. (LOS 1127.) Mitigation Measure BIO-4 includes in part that the Department shall monitor for invasive aquatic plant species and those species shall be removed in accordance with BIO-4(1) and (2). Those subsections state that where necessary to control identified populations, they will be treated according to control methods and practices considered appropriate for those species. (LOS 108-109.)

The Department points out that it currently has a contract with the Department of Parks and Recreation Division of Boating and Waterway (DBW) to monitor and treat invasive vegetation at the Department's Fish Restoration Program restoring sites, including the Project Site. (LOS 159-160.)

Petitioners' argument that the DBW is underfunded and doing a poor job of controlling water hyacinth fails. Petitioners have not presented evidence in the record that DBW is underfunded. Nor has Petitioners shown that DBW is currently unable to control the water hyacinth. Petitioners note an increase in hyacinth from 2004 to 2014, but have not shown further increases since 2014.

In reply, Petitioners argue that the mitigation measure as it relates to water hyacinth was not included in the DEIR and the impacts of invasive aquatic plants on water quality and fish survival were not analyzed in the DEIR, thus the FEIR needs to be recirculated. The DEIR stated that water hyacinth would be removed during construction activities and that it would be removed or sprayed for long term management. (LOS 1111, 1127.) Mitigation Measure Bio-4 was included in the DEIR, but without specific reference to invasive aquatic plants. (LOS 1244-45.) The changes to BIO-4 in the FEIR were not significant. The Court finds that Mitigation Measure BIO-4 is not an improper deferred mitigation (see discussion below) and therefore, the conclusion that the invasive plants will have a less than significant impact with mitigation is supported by substantial evidence.

The DEIR discusses the type of habitat suitable to smelt and explains the Project will provide a direct connection to the Shag Slough, which is known to support all life stages of the delta smelt. (LOS 1113; see also 1220-21 [discussing smelt habitat]; see also 3269- 3286 (Appendix H).) The DEIR also states that "If feasible... tidal channels excavation within the Proposed Project Site would be lined with sand or other suitable substrates for Delta Smelt spawning." (LOS 1114.)

Petitioners focus on the "if feasible" discussion regarding the placement of sand within tidal channels to help create smelt spawning areas. Petitioners have not shown that mitigation measures, including the placement of sand, are required to reduce the

impact on delta smelt. The Project is designed to restore 3,164 acres to tidal marsh and will create new habitat for delta smelt. The DEIR (in Appendix H) considered the requirements for delta smelt and how the Project will benefit delta smelt. (LOS 3282-84.) Appendix H found that "[t]he habitat benefits of restoring the Project area for Delta smelt are anticipated to be numerous and dynamic." (LOS 3284.) Thus, the record shows that the Project will benefit delta smelt regardless of whether sand is placed in the channels.

4. Hazards and Flooding

CEQA Guidelines Appendix G requires consideration of whether the Project would "Substantially alter the existing drainage pattern of the site or area... in a manner which would... ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii)create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows." (CEQA Guidelines, Appendix G, Section X. Hydrology and Water Quality.) CEQA also requires consideration of whether the Project would "Result in inadequate emergency access." (CEQA Guidelines, Appendix G, Section XVII. Transportation.)

a. Impacts on Flood-Control Infrastructure

Petitioners argue that the Project will change wind-wave generation that could lead to erosion of nearby levees and the Project does not adopt mitigation measures to prevent this.

The DEIR noted that there was a concern that the Project would expose levees to wind-generated waves and lead to erosion of levees. (LOS 1346.) The Project design includes several items to protect from such wind-wave erosion. The Project includes a new Duck Slough Setback Levee, just east of Duck Slough. (LOS 1079, 1110.) This Setback Levee will be designed so there is no overtopping from wave run-up. (LOS 1347.) The Cache/Hass Slough east levees will undergo improvements and be turned into a training levee, which would break waves from the Project Site so they would not continue to propagate towards the Cache Slough and Hass Slough west levees. (LOS 1347, see also 1110.) In addition, the DEIR concludes that the Cross Levee (an east-west levee in the southern portion of the Project Site) would break all waves emanating from the Project Site. (LOS 1347.) The DEIR concludes that the Project would not result in adjacent properties being subject to increased wave run-up beyond the Cache/Hass Slough Training Levee and the Duck Slough Setback Levee and therefore, the Project's impact on wind-wave generated erosion would be less than significant. (LOS 1348.) Additional information on the levees and their designs is discussed in Appendix D to the DEIR. (LOS 1771.) Here, the DEIR raised a concern about potential erosion and then included ways to avoid such erosion as part of the Project's design. Petitioners have not shown that the DEIR was required to include specific mitigation measures to prevent wind-wave

erosion when the Project itself was designed to reduce such impacts to less than significant. Furthermore, Petitioners have not shown that the DEIR's conclusion that there would be a less than significant impact on wind-wave generated erosion was not based on substantial evidence.

Petitioners state the Project will result in degrading of the Yolo Bypass Levee. The evidence, however, does not support this statement. Prior to the completion of the DEIR, an email was sent stating that the Yolo Bypass Levee is not proposed to be maintained and will degrade overtime. The email explained that this has the potential to put significant pressure on the Cache/Hass Slough levee and that in a 100-year event will contribute to increased wave energy on the RD 2060 levee. The email went on to suggest several ideas, including making the Cache/Hass Slough Levee a training levee. (LOS 96877.) Petitioners have not shown that this email was not considered and addressed in the DEIR. Instead, it appears that the Project included the training levee suggestion made in this email.

Petitioners also argue that the Project will alter hydraulics in the Cache Slough region during high flow events, which would put pressure on other levees. Reclamation District 2068 states that the Project would alter hydraulics in the Cache Slough region at high flow events causing increased water levels and flooding pressure on State Plan of Flood Control levees that already have erosion, stability and freeboard deficiencies and that levees would be subject to increased wave fetch and erosion. (LOS 730.) The North Delta Water Agency also raised concerns about the Project causing more intensive wave-fetch forces leading to erosion of levees for seven reclamation districts in the vicinity. (LOS 242.) The FEIR explains that DEIR included Appendix D, which looked at these issues in detail. (LOS 242; see also 1771.) in particular, the FEIR points to a technical memorandum analyzing wave runup and wind setup for the Duck Slough Setback Levee, the Cache/Hass Training Levee, the Cross Levee and the Yolo Bypass East Levee. (LOS 2495.) The FEIR also points to a map showing the various Reclamation Districts near the area (LOS 1829) and then explains why the concerns about erosion of levees for the seven reclamation districts is unfounded. (LOS 243.)

The North Delta Water Agency also stated that the change in velocities may create erosion of nearby levees during high flow conditions. (LOS 246.) Yet, Appendix D considered velocity on nearby levees and found that existing rock slope protection was sufficient to mitigate erosion during a 100-year event. (LOS 1805.)

The DEIR states that the levee systems on the Project Site's perimeter along Cache and Hass Sloughs are considered deficient due to lack of adequate freeboard and deferred maintenance, and they are particularly vulnerable to increases in water level, erosion and wind-wave run-up potential. (LOS 1084.) The levees identified as being deficient are the Cache Slough Levee, the Hass Slough Levee and the Yolo Bypass West (Shag Slough). (LOS 1350.) The Shag Slough levee will be breached in nine places in order to create the Project. (LOS 1350.) The DEIR explained that the Project was designed to limit increases of flood stages in Cache and Hass Slough to no more than 0.01 foot. (LOS 1350.) In addition, the Duck Slough Setback Levee is designed to be built at a 100-year event plus six feet of freeboard and an extra one foot for climate resiliency. (LOS 1350.)

Petitioners argue that the EIR fails to adequately analyze impacts of the levee system, failed to include substantial evidence and failed to include mitigation measures. Petitioners' argument fails on all points.

b. Loss of Flooding Capacity and Impacts on Emergency Access

Petitioners argue that the EIR fails to consider the loss of 40,000 acre-feet flood capacity due to changes to Unit 109, citing to page II-39 in the DEIR. (LOS 309.) That cite, however, does not state that the Project will reduce flood capacity. (LOS 1073.) The FEIR responds to this comment by also noting it was unclear what was being referred to. (LOS 309.) The FEIR goes on to explain that the Unit 109 levee system is designed to protect 13,000 acres of land from flooding and was not designed as a flood storage system. FEIR also states that the Project will create approximately 40,000 acre-feet of flood storage. (LOS 309.) Petitioners have not shown that the EIR failed to consider a loss of flood capacity due to changes to the Unit 109 levee.

Petitioners argue that the EIR did not consider the negative effects on emergency access, including changes to the emergency response plans and limits on PG&E's ability to access its towers during an emergency. (LOS 342.) The DEIR stated that the Project would not alter publicly accessible roadways in a manner that might result in inadequate emergency access. Liberty Island Road presently dead ends on the western side of the Liberty Farms Property and does not serve any populated areas that require emergency access. The only property that would see a potential decrease in emergency access is the Liberty Island Ecological Reserve, which is only accessible by foot or boat, and the pedestrian access will be removed as part of the Project. (LOS 1151.) Later, the DEIR notes that the Reserve does not contain any residences or businesses that would require evacuation or response in the event of an emergency. (LOS 1319; see also 342-343.) The FEIR also explains that access roads will be created on top of the levees to allow access for non-public uses. (LOS 310, 341, 734.)

Petitioners argue that the FEIR's statement that the alteration to the RD 2098/2068 Emergency Operation plan will be considered "at the appropriate time" (LOS 344) is an improper deferred mitigation. Petitioners have not shown that there is a significant impact on emergency access such that a mitigation measure is required. At oral argument, Petitioners acknowledged this point but argued that a proper analysis of this issue may have shown a significant impact on the environment, which might have required mitigation.

Petitioners also argue that the Project will affect RD 2068's ability to reduce flooding in RD 2068 during a high-water event by making a cut in Liberty Island Road (along with a second relief cut) to allow water to flow into RD 2098. (LOS 309, 733.) The FEIR states that the Department "and its contractors will comply with all applicable regulatory requirements, including alteration to the RD2098/2068 Emergency Response plan at the appropriate time." (LOS 734.) The FEIR did not provide further details on the Project's impact of flood risks to RD 2068 and instead referenced Master Response 12, which generally states that certain matters are not matters related to environmental impact. (LOS 157-158.)

The Project will require RD 2068 to re-consider its emergency response plan. Petitioners have not shown, however, that it is reasonably foreseeable that their new emergency response plan will result in physical changes to the environment. The Project will eliminate Petitioners' ability to make a cut in Liberty Island Road, but the Project will also add 40,000 acre-feet of flood storage in the general area where RD 2068 would have cut Liberty Island Road to slow or eliminate flooding upstream. Thus, it is possible that the Project will have a positive effect on RD 2068's ability to handle high-water events. It is, of course, possible that the Project will have a negative effect. But the question here is whether there is evidence in the record that the reconsideration of RD 2068's emergency response plan will result in physical changes to the environment. The Court finds that the Petitioners' claims here are too speculative.

> c. Long-term maintenance of the Duck Slough Levee and Regional Flood Impacts

According to the DEIR, RD 2098 is responsible for maintaining the Duck Slough Levee and the Department is responsible for maintaining the rest of the Project Site. (LOS 1098, LOS 81477.) RD 2098 endorsed the Project in March 2019 based on the agreement that it would only be responsible for operations and maintenance of flood control facilities north of and including the Duck Slough Levee. (LOS 81476-81478.) Petitioners are concerned that the Project will reduce funding for RD 2098 such that RD 2098 will not be able to properly maintain the Duck Slough Levee. (LOS 201-202, 310, 730.) If that levee is not properly maintained it can create flood risks in nearby Reclamation Districts. (LOS 310.) RD 2060 and RD 2068 point out that RD 2098's funding comes from the landowners in that district and that the Project will reduce the acreage in the District "leaving little acreage and few landowners" to meet the operation and maintenance costs. (LOS 310.)

The FEIR stated that RD 2098 would be responsible for maintenance and operation of the Duck Slough Setback Levee and noted that there is an existing statutory framework for the responsibility of RDs, funding, and even creation of a state-managed maintenance area to ensure continued function. (LOS 151.) Beyond this statement, Respondents and Real Party argue that these concerns about long-term maintenance economic concerns and thus, not required to be included in the EIR.

"[S]ocial, economic and business competition concerns are not relevant to CEQA analysis unless it is demonstrated that those concerns will have a significant effect on the physical environment. [Citations.]" (*Maintain Our Desert Environment v. Town of Apple Valley* (2004) 124 Cal. App. 4th 430, 446; see also CEQA Guidelines § 15064(f)(6), §15131 and §15382.)

In Maintain Our Desert Environment the project was a large distribution center and the identified real party in interest was Pluto Development. Plaintiff (and the Attorney General) argued that the project description violated CEQA because it did not identify the planned user of the property as Wal-Mart. Plaintiff argued that had Wal-Mart been disclosed as the user of the project there might be additional public comments on the project. The Court rejected this argument because there was no showing of undisclosed environmental impacts. It explained that the plaintiff needed to show that the identity of the final user of the project "implicates potential physical environmental impacts" and that "in order to establish that the EIR was inadequate because it did not disclose Wal-Mart as the end user of the Project, [plaintiff] must rely on something more than speculation. [Citation.]" (Maintain Our Desert Environment, supra, 124 Cal.App.4th at 446.)

In Goleta Union School Dist. v. Regents of University of California (1995) 37 Cal.App.4th 1025, the local school district objected to the university's plan for longrange development, including increasing the amount of students at the university. The SEIR showed that there would be an increase of 192 students in the local school district. The school district argued that CEQA required consideration and mitigation of classroom overcrowding. The Appellate Court disagreed and found that classroom crowding, per se, does not constitute a significant effect on the environment under CEQA. The Court stated that a fivefold increase in student enrollment would likely necessitate the construction of additional classrooms, which could constitute a physical change that significantly affect the environment. (*Id.* at 1032.)

Petitioners have not provided evidence in the record that shows RD 2098 will not be able to afford maintenance of the Duck Slough Setback Levee beyond mere speculation. The Court finds that Petitioners' argument that RD 2098 may lack insufficient funding in the future to maintain the Duck Slough Setback Levee is too speculative and therefore, the funding issue is an economic one that does not require analysis in the EIR.

- 5. Hydrology and Water Quality
 - a. Algal Blooms

Petitioners argue that the EIR failed to consider how the Project will increase harmful algal blooms (HABs) and that the standard of review here is independent

judgment. The FEIR discussed HABs in detail and therefore, the Court finds that the review here is substantial evidence, not independent judgment. Petitioners argue that there are five primary environmental factors that trigger the emergence and subsequent growth of Microcystis in the water column of Delta waters:

(1) water temperatures above 19°C;

(2) low flows and channel velocities resulting in low turbulence and long residence time;

(3) water column irradiance and clarity;

(4) sufficient nutrients availability of nitrogen and phosphorus and

(5) salinity below 10 ppt.

(LOS 379; 5699; see also LOS 444-504 (exhibit 7 to letter).) Petitioners also point to a study that explains growth of cyanobacteria in the Delta can increase with nutrient loads, shallow water and increased water temperature. (LOS 624 (exhibit 9 to letter); see also 5948.) The study notes that climate change will increase the risk that HABs will become increasingly competitive and that increased temperatures will increase stratification and water column stability, which also benefit HABs. (LOS 633, 5957.)

Respondent and Real Party argues that the FEIR considered all of these factors and found the changes would be less than significant. The DEIR mentions HABs in one paragraph, explaining that "[t]he emergence of increased concentrations of harmful algae blooms is indicative of potential problems with water stagnation, nutrient loading, and temperature increase." (LOS 1324.) The paragraph also discussed sources of nutrients and stated that "cyanobacterium *Microcystis aeruginosa* has been an increasing component of summer harmful algal blooms in the Delta." (LOS 1324; see also LOS 17602 [article cited in footnote 8].) Petitioners read this paragraph as admitting that harmful algal blooms have been increasing, however, the paragraph does not state that HABs are increasing.

The FEIR added additional analysis related to HABs. The FEIR states that current farming practices use pesticides and fertilizers, but such practices would end prior to construction and would decrease inputs that might contribute to water quality issues over time as part of the cumulative scenario. (LOS 130.) In addition, the Project would introduce tidal influence to the Project Site, which will reduce water stagnation. (LOS 130.) The section concludes that the Project is expected to have a positive influence on water quality be eliminating agricultural inputs and by reducing stagnation that contribute to the proliferation of HABs. (LOS 130; see also 162-163.)

As to water temperature, the DEIR explains that there is likely to be some water temperature increase from solar radiation in the shallow flats, but the water will mix with the adjacent bodies of water. In addition, the presence of vegetation in the marsh is expected to have a cooling effect. The DEIR concluded that "[t]emperature decreases associated with marsh vegetation shading are therefore anticipated to roughly offset or decrease temperature increases associated with solar radiation due to shallow depth." (LOS 1348 and 1274.) The DEIR cited to two studies supporting these conclusions. (LOS 21387 (cited at 1348) and 27227 (cited at 1274).) The FEIR concludes that "the Proposed Project would have minimal effect on water temperature that may influence the presence of HABs." (LOS 162.)

Petitioners argue that the DEIR's water temperature analysis is faulty because it does not support the statement that vegetation will provide a temperature offset and the Project will wait for natural revegetation. The DEIR relied on several studies to support its conclusions on water temperature (LOS 1348) and Petitioners do not offer any expert evidence, studies or opinions that explain why the water temperature conclusions are incorrect or why the DEIR's analysis is incomplete.

The FEIR notes that hydrodynamic modeling found that much of the area within and adjacent to the Project Site was found to have water residence times of a week or more. (LOS 153.) The DEIR estimated residence times at 1 to 14 days. (LOS 1348.) Petitioners argue that longer residence times create a higher probability of HABs. One of the comment letters stated that the technical analysis for another project found that 3-5 days of water retention begins to create risk of HABs. (LOS 379.) The FEIR did not specifically address the difference between 1 to 14 days and a week or more of water residence times. That omission, however, does not mean that the FEIR did not analyze the impact of water residence times and HABs. The FEIR explained that the Project would reintroduce tidal influence to the Project Site, which will reduce water stagnation. (LOS 163.) It may be that water residence times will be one week or more and the risk of HABs will still exist at the Project Site, but the evidence in the EIR shows that the risk will be lower than it is now.

As to salinity, the FEIR relies on the discussion in the DEIR. The DEIR found that the salinity levels would be in compliance with D-1641 standards and the salinity changes would not cause an adverse effect on the Delta as a drinking water source. (LOS 1342.) The FEIR concludes that the Project "would not result in substantial adverse effects on the beneficial use of Delta waters as drinking water or exceed the applicable threshold of significance for agricultural operations or fish and wildlife populations postconstruction." (LOS 162.)

In reply, Petitioners point out that the discussion in the DEIR on the various relevant factors was not specific to HABs. While the DEIR did not analyze each of the five factors in their effects on HABs, the FEIR considered each factor.

Finally, Petitioners argue that the EIR failed to consider cumulative impact of HABs. The FEIR discussed HABs and found there to be a less than significant impact cumulative impact because the Project would not contribute to an increase in HABs.

The Court finds that the FEIR provided substantial evidence of its conclusion that the Project will have a less than significant impact on water quality due to the risk of HABs.

b. Localized Water Supply

Petitioners argue that the FEIR failed to consider whether the Project will result in the need to relocate nearby water facilities due to changes in water quality and the potential for water facilities to entrain fish. (LOS 307-308; 324; see also 5614.) Petitioners point out that one of the Project objectives is to "create, restore, and maintain ideal habitat conditions to encourage the proliferation of Delta Smelt and other sensitive fish species associated with unrestricted tidal freshwater ecosystems in the Delta." (LOS 1036.) The Project will not remove or otherwise relocate water infrastructure, including diversions. (LOS 308.)

The question here is whether the Project's impact on local water facilities is the type of indirect impact that must be considered under CEQA. "An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable." (CEQA Guidelines § 15064 (d)(3).)

The issue of water quality is discussed above.

As to the concern that water diversion facilities may need to move due to increased fish entrainment, Petitioners are concerned that "[a]s fish density increases, the risk of entrainment increases, and more individual fish may be subject to take water diversions than under existing conditions." (LOS 307.) Petitioners have not explained under what circumstances a water diversion facility may need to move due to fish entrainment. Nor have they explained what kind of increase in fish is expected from the Project. Respondent and Real Party argues that the Project's goal is to create more habitat and not necessary increase fish population, but such an argument ignores the mentions elsewhere that the Project will have a net benefit to special status fish, including Delta smelt (LOS 1403-04) and is designed for "recovery of Delta smelt" (LOS 1103).

Petitioners have not met their burden of showing that it is reasonably foreseeable that water diversion facilities will be moved, which would require additional environmental analysis.

c. Regional Water Supply

Petitioners point out that the Delta is an important regional water source and several agencies submitted a comment raising regional water issues. (LOS 232; see also 5672.) Petitioners argue that in order to comply with D-1641 standards, the Department

will have to take water from an alternate source in order to mitigate salinity levels. Petitioners are also concerned that the Project will require the release of storage water to comply with D-1641, which would affect the post-1914 appropriative water rights. (LOS 251.) Petitioners' argument here is based on their argument above that the Project will increase salinity levels to such an extent that water release will be required to comply with D-1641. The FEIR found that the Project would not exceed D-1641 standards and thus, there would be no need to release storage water to prevent exceeding D-1641 limits.

Petitioners also argue that the EIR failed to disclose the impacts of invasive aquatic vegetation on regional water supply. Invasive plants, such as water hyacinth, consume more water than native plants. (LOS 377.) The FIER found that with mitigation measure BIO-4 the Project will have a less than significant impact on water quality due to invasive aquatic vegetation. The Court finds that the FEIR has provided sufficient analysis for its conclusion that there would not be an increase in invasive species.

6. Recreation Impacts

Currently there is pedestrian access for fishing along the shoreline of the Liberty Island Ecological Reserve (LIER) by way of the Shag Slough Bridge. In addition, pedestrians can fish along the Shag Slough Levee. (LOS 155, 1110, 1377; 5686.) The Project will remove the Shag Slough Bridge and breach the levee along the Shag Slough in several places, which will eliminate pedestrian access to the Reserve and the Shag Slough Levee. (*Id*.)

The FEIR and DEIR acknowledge that the Project will eliminate this pedestrian access, but found the environmental impact to be below the threshold of significance and thus, a less than significant environmental impact. (LOS 155-156, 1377-1379.) The DEIR considered three thresholds of significance, including the two from CEQA Guidelines, Appendix G, plus an additional one specific to this Project:

- (1) increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- (2) include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment; and
- (3) substantially decrease opportunities to fish from the shoreline within the Delta region.

(LOS 1377.)

Petitioners argue that the Department erred in finding that that third threshold of significance was not met. The Department of Fish and Game believed that the loss of public land-based access to the Liberty Island Ecological Reserve would be a significant
impact and pointed out that there would be a loss of three miles of land that can be used for fishing. (LOS 5686.) The Department of Fish and Game states that public bank fishing is already very limited in the Cache Slough Complex as most levees are on private property or have restricted access and that the removal of the pedestrian access will disproportionally affect lower income individuals who cannot afford boats. (*Id.*)

The DEIR provided an explanation for the conclusion that the Project would not substantially decrease opportunities to fish from the shoreline within the Delta region. The DEIR found 28 informal fishing areas and 30 fishing piers within a 60-minute drive of the Project Site. (LOS 1375-1376.) The DEIR includes a table of approximately 19 sites that offer about 500 linear feet of fishing per site, and two other sites offer 2,000 and 3,000 feet of fishing. (LOS 1375-76.) Using these numbers, the DEIR shows there are about 15,000 linear feet of fishing near the Project Site. (The actual amount is likely higher, as the DEIR mentions 58 fishing locations, but only provides size data on the locations in the table.) The Court notes that there are 5,280 feet in a mile and that 3 miles equals 15,840 feet.

It appears that the loss of 3 miles of shoreline fishing would be approximately equal to the amount of shoreline fishing remaining in the 60-minute driving area from the Project Site. Even if the amount of shoreline access is doubled, the Project would still result in a loss of about one third of the shoreline accessible by pedestrian for fishing. Based on the record available, it appears that the Project will have a significant impact on recreation based upon the third threshold of significance. However, the DEIR and FEIR concluded that the Project's impact on recreation would be less than significant.

The FEIR explains that the Project will also add 20 miles of new channels accessible by watercraft that will increase fishing opportunities. (LOS 155.) But the FEIR does not explain whether any of these new channels will have shoreline fishing access.

Respondents and Real Party argue that the Shag Slough Bridge is unsound and thus, should not be considered when evaluating the Project's impact on recreation. The Record does not support this argument. The Bridge is referred to as "structurally deficient" with a note that it "cannot support emergency vehicles." (LOS 1369, see also 1374.) Throughout the DEIR, there are statements that the Bridge provides pedestrian access to the Liberty Island. The DEIR notes that finishing is not allowed from the Bridge, but it is known to occur. Also, the Bridge provides pedestrian access to Liberty Island where fishing is permitted. (LOS 1374.)

Respondents and Real Party argue that the DEIR estimates only about 80 people use the area for fishing (LOS 1378), and given that small number, any loss of use would be less than significant. The number of fisherpersons is relevant to the first threshold of significance, but as to the third threshold of significance the concern is whether the Project will substantially decrease *opportunities* to fish from the shoreline within the Delta region. Thus, whether people are currently using the Project Site for fishing is not the inquiry. Instead, the inquiry is how will the Project effect opportunities to fish from the shoreline within the Delta.

Here, the available information shows that the Project will result in the loss of 3 miles of shoreline fishing. The information available in the DEIR shows that the loss of 3 miles of shoreline fishing would be a significant impact and the EIR's conclusion to the contrary was not supported by substantial evidence. Respondent failed to properly consider that Project's impact on opportunities to fish from the shoreline within the Delta region. Therefore, Respondents must re-consider this issue.

7. Energy Impacts and Appendix F

Petitioners argue that the DEIR and FEIR did not address the various requirements in CEQA Guideline, Appendix F. The DEIR states "Energy use associated with the Proposed Project is limited to construction-related energy such as fuel used to power equipment and to move workers to and from the site, as well as maintaining electrical power to existing pumps to dewater the site during construction." After construction, energy uses would be limited to powering an existing pump in Duck Slough, and fuel use for vehicles supporting maintenance and monitoring activities during the post-construction management and monitoring period. (LOS 1133.) Exhibit B to the DEIR listed the energy uses during construction. (LOS 1585-1586.) The DEIR included a mitigation measure for reduction in emissions during construction. (LOS 1185.) The DEIR states that materials excavated during construction will be re-used as appropriate to create tidal habitat. (LOS 1114.) (Petitioners failed to address several of the cites to the record provided by Respondent and Real Party.)

Petitioners have not met their burden of showing that the FEIR did not consider the energy impacts of the Project as required under CEQA.

C. FEIR Response to Public Comments

Petitioners argue that the FEIR failed to respond to public comments as required by CEQA. CEQA Guidelines require that the lead agency provide written responses to public comments submitted in response to the DEIR. "Responses to comments need not be exhaustive; they need only demonstrate a 'good faith, reasoned analysis.' [Citations.] ' "[T]he determination of the sufficiency of the agency's responses to comments on the draft EIR turns upon the detail required in the responses. [Citation.] Where a general comment is made, a general response is sufficient." ' [Citations.] ' "[A]n EIR is presumed adequate [citation], and the [petitioner] in a CEQA action has the burden of proving otherwise." ' [Citations.]" (*Gilroy Citizens for Responsible Planning v. City of Gilroy* (2006) 140 Cal.App.4th 911, 937; see also, CEQA Guidelines, § 15088(c).) Petitioners argue that there are several issues raised in the public comments that the FEIR failed to adequately address. Petitioners' citations to the record, however, are almost entirely citations to the public comments. In addition, Petitioners provided only a few citations to the FEIR where the issues were addressed. Petitioners were obligated to provide citations to all relevant evidence in the record. (*No Slo Transit v. City of Long Beach* (1987) 197 Cal.App.3d 241, 251 ["It is incumbent upon appellants to state fully, with transcript references, the evidence which is claimed to be insufficient to support the finding."].) While Petitioners of course cannot provide a page-specific citation to responses that never were provided, in some instances they have asserted that there were no responses, while the Court's review of the record shows that there were. In addition, when showing that no response was provided to a comment, it is helpful to cite to the comment in the FEIR as that often helps the Court to easily determine whether a response was provided.

The Court's ruling on this section is limited to issues where Petitioners provided citations in the record to the issue.

Petitioners argue that the FEIR did not provide an adequate response to a comment on organic carbons. For this argument, Petitioners do not cite to a specific public comment. Instead, they cite only to the Master Response 8 on organic carbon in the FEIR. (LSO 152-153) Without a cite to a specific public comment, the Court cannot tell which comment Petitioners argue was not the subject of an adequate response. In addition, Petitioners do not explain how Master Response 8 was inadequate.

Petitioners argue that the FEIR did not provide an adequate response to a comment on the lack of ability of RD 2098 to fund ongoing maintenance and again only cite to the Master Response on the issue without including any public comment. (LOS 151-152.)

Petitioners argue that FEIR did not respond to comments that the Project would impact its ability to divert water from the Cache Slough Pumping Plant and similar concerns raised by the Solano County Water Agency. (LOS 5587, 5628, 5654; the corresponding FEIR cites are LOS 707, 729, 363.) Petitioners point to several comments that explain the Project's intended result is to increase the number of listed and endangered fish species, which would adversely impact the ability of municipal water users to divert water. (LOS 5614-15; 5628, 5639, 5654, 5669; the corresponding FEIR cites are LOS 307, 729, 335-336, 363, 244.) Petitioners state that the FEIR addressed concerns about salinity in the water and how it relates to municipal water impacts (LOS 140-141), but failed to address the concern that more fish will threaten the operation of municipal intakes. Petitioners did not address or even cite to Master Response 3 in their opening brief, which addresses local water diversions and fish species. (LOS 146-147.)

As discussed above, the Court finds that Master Response 3 sufficiently responded to Petitioners' concerns regarding fish entrainment and how that might

impact water diversion facilities and thus, the Court finds that Master Response 3 provides a good faith, reasoned analysis of Petitioners' concerns on this issue. On the remaining comments, Petitioners have not met their burden of showing that the FEIR did not adequately respond to public comments.

D. Mitigation Measures

1. Farmland Impact / Conservation Easements

The Project would result in the loss of 1,460 acres of prime farmland by converting that land to tidal marsh. (LOS 1166.) The EIR concluded that this loss would be potentially significant unless mitigated. (LOS 1166.) The DEIR includes two mitigation measures: AG-1a and AG-1b. Measure AG-1a provides funding to improve nearby farmland, including improvements on 660 acres of prime farmland and improvements on 1060 acres of non-prime farmland. (LOS 1166-67; see also LOS 145-146.) Measure AG-1b requires the purchase of 1,000 acres of land for an agricultural conservation easement. The easement would require that this land be irrigated farm or pasture. (LOS 1167-1169.) The property chosen for the easement will be located in Solano County that is Prime Farmland according to the USDA Soil Survey, the land will have adequate water supply and the land will not have previously been encumbered by an agricultural conservation measures, the DEIR concludes that the Project will have a less than significant impact.

Petitioners argue that the use of conservation easements as mitigation was improper because that mitigation measure prevents the loss of agricultural land due to development, but does not create new agricultural land to offset the loss of the farmland at the Project Site.

In Citizens for Open Government v. City of Lodi (2012) 205 Cal.App.4th 296, the EIR found the loss of farmland could not be mitigated with a conservation easement to a less than significant impact. The city made a statement of overriding consideration as to the significant impact on farmland because there was no feasible mitigation for the loss of farmland. The EIR included a partial mitigation with a conservation easement at 1 to 1 ratio. The Court of Appeal found that the EIR had correctly concluded that there was no feasible mitigation measure to replace the loss of farmland. (*Id.* at 322-324.)

A year later, however, *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 238, stated that agricultural conservation easements "may appropriately mitigate the direct loss of farmland when a project converts agricultural land to a nonagricultural use, even though an ACE does not replace the onsite resources." (*Id.* at 238.) In King & Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814, the Court of Appeal found that the use of an agricultural conservation easement to mitigate the loss of farmland was not a proper mitigation. The Court explained that "[e]ntering into a binding agricultural conservation easement does not create new agricultural land to replace the agricultural land being converted to other uses. Instead, an agricultural conservation easement merely prevents the future conversion of the agricultural land subject to the easement. Because the easement does not offset the loss of agricultural land (in whole or in part), the easement does not reduce a project's impact on agricultural land would remain significant after the implementation of the agricultural conservation easement." (*Id.* at 875.)

In Save the Hill Group v. City of Livermore (2022) 76 Cal.App.5th 1092, the project acknowledged a loss of 32 acres of habit for special status species. The EIR included compensatory mitigation at a 2.5:1 to 3:1 ratio for this permanent habitat loss for each of these species and required the land to be in a conservation easement. (Id. at 1116.) Relying on King and Gardiner, petitioner argued that the conservation easement would not result in the provision of any new resources to offset or compensate for the habitat permanently lost to the project and thus, would not mitigate the loss of habitat. The Court of Appeal rejected this argument. It distinguished *King and Gardiner* as involving the loss of 7,450 acres as opposed to 32 acres. But the Court of Appeal also explained that such conservation easement mitigations were allowed. "More importantly, CEQA does not require mitigation measures that completely eliminate the environmental impacts of a project. Rather, CEQA permits mitigation measures that would substantially lessen the significant environmental effects of the project. (§ 21002.) The Guidelines, in turn, provide that mitigation may include '[c]ompensating for the impact by replacing or providing substitute resources or environments ..., ' (Guidelines, § 15370, subd. (e), italics added.)" (Id. at 1117.) The full text of section 15370(e) states that mitigation includes "[c]ompensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."

Save Panoche Valley v. San Benito County (2013) 217 Cal.App.4th 503 involved a solar project that would use 4,885 acres and the solar items would be removed when the project lost its usefulness (after 30 years). The court rejected the argument that the project was required to create additional agricultural lands to compensate for the ones utilized for the project site are unsubstantiated. (*Id.* at 529.) "The goal of mitigation measures is not to net out the impact of a proposed project but to reduce the impact to insignificant levels." (*Ibid.*) The mitigation measures there, however, involved conservation easements, but also that the developer would be required to dismantle the project upon conclusion of its useful life, which would include disassembly of any structures and restoration of the lands.

Respondent and Real Party argue that they were not required to identify a specific property for the conservation easements. In Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260 the EIR included a mitigation measure that required the acquisition of property near the project site as habitat for the Quino butterfly that would be impacted by the Project. (Id. at 274.) The court noted that "[g]enerally, an agency does not need to identify the exact location of offsite mitigation property for an EIR to comply with CEQA. [Citation.]" (Id. at 279.) In Preserve Wild Santee a specific property was not identified, but the EIR included criteria on how the property would be selected including that 100 acres would be adjacent to the project site and the remaining acres would either support the Quino or be proven to have a high potential to support the Quino. (Id. at 274.) In Save the Hill Group the developer identified a specific property for the conservation easement, which the court of appeal stated was suitable for mitigation. (Save the Hill Group, supra, 76 Cal.App.5th at 1116.) Relying on Preserve Wild Santee the court went on to state that if the chosen site proves inadequate for mitigation, the city could compel the developer to find and protect an alternative site. (*Ibid.*) Save the Hill Group did not address whether the RFIER included any criteria on how an alternative site would be chosen.

The Court finds that agricultural conservation easements can be a proper mitigation measure. In order for an agricultural conservation easement to be a proper mitigation measure, however, there must be evidence in the record as to the planned easement area or criteria that will be used to select the easement location. Here, the record shows that the property selected for the easement will be prime farmland in Solano County with sufficient water for irrigation. In addition, referring the "property" in the singular suggests that the easement will occur on one continuous piece of land as opposed to multiple smaller easements. The Court finds that these criteria are sufficient to show that an agricultural conservation easement in this case is an appropriate mitigation measure.

In addition to the agricultural conservation easement mitigation measure, the DEIR included another mitigation measure that would provide improvements to 1,060 acres of non-prime farmland as well as improvements to prime farm land. The DEIR found that these improvements would "increase the agricultural value and productivity of approximately 1,700 acres". (LOS 1167.) When considering these mitigation measures together, there is substantial evidence to support the finding that these mitigation measures reduce the environmental impact to less than significant.

2. Biological Resources

The DEIR states that the Project could facilitate the introduction and establishment of invasive species. (LOS 1244.) The DEIR found that with Mitigation Measure BIO-4, the Project's impact on invasive species would be less than significant. (LOS 1244.) Petitioners argue that Mitigation Measure BIO-4 is insufficient because it does not disclose and evaluate how the Department will manage invasive species during the operational phase of the project or the criteria for their removal. (LOS 1244.) In reply, Petitioners argue that the mitigation measure is improperly deferred.

BIO-4 requires that protocols be established prior to construction. The protocols include: (1) identifying weeds that are rated high or moderate for negative ecological impact in the California Invasive Plant Database that have a potential to spread off-site and/or sustain on-site; (2) where determined necessary to control populations, weed infestations shall be treated according to control methods and practices considered appropriate for those species; (3) weed control treatments include all legally permitted herbicide, manual, and mechanical methods and will be in compliance with state and Federal law; and (4) the timing of weed control treatment shall be determined for each target plant species with the goal of controlling populations and the Department will apply these rules for invasive aquatic plant species. (LOS 108-109; see also, 1056, 1244-43.) The FEIR notes that the Department currently has a contract with the Department of Parks and Recreation Division of Boating and Waterway to monitor and treat invasive vegetation. (LOS 159-160.) Respondent and Real Party point out that there is a list of the parties responsible for monitoring and adaptive management tasks. (LOS 75868-75869.)

Respondent and Real Party also argue that BIO-4 should be considered in conjunction with BIO-2, which is designed to create more native plant growth and discourage invasive species growth with a 1: 1 replacement goal. (LOS 1241-42.) BIO-2 may have an effect on invasive plant species, but it does not provide specific criteria to determine when action will be taken on invasive plant species.

"Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan. [Citation.] On the other hand, an agency goes too far when it simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report. [Citation.]" (*Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275; see also CEQA Guidelines, § 15126.4, subd. (a)(1)(B).)

BIO-4 provides sufficient information on how invasive species will be identified and what types of controls will be used. The Court finds that BIO-4 is not an improper deferred mitigation.

3. Hydrology and Water Quality

The DEIR found that it would be possible for soil or contaminants to enter surface or groundwater during construction, but found that the impact would be less than significant with mitigation. (LOS 1340.) The EIR includes two mitigation measures, HYDRO 1 and HYDRO 2. (LOS 129, 1347.) Petitioners argue that these mitigation measures are insufficient because the mitigation measures only apply during construction and fail to address the adverse impacts on water quality due to invasive aquatic species, salinity and bromide and organic carbon. Petitioners' argument here is a repeat of their argument above that the EIR failed to properly analyze the Project's impact on water quality.

The EIR found that invasive aquatic species, salinity and bromide and organic carbon would have a less than significant impact on water quality. Thus, no mitigation measures were required as to these items. The Court finds that the EIR's mitigation measures on hydrology and water quality are sufficient.

E. Cumulative Impacts

The Project is designed to help meet the Department's obligation to restore 8,000 acres of tidal marsh and is part of an effort to restore or enhance 30,000 acres of habitat in the Delta and Suisun March. (LOS 1098.) The DEIR lists several other projects involving habitat restoration in the nearby areas. (LOS 1398-1400.)

Petitioners raise several arguments regarding the salinity levels, including a concern that salinity will exceed 5% in some places and the concern regarding soil salinity levels. (LOS 351; 394.) The FEIR explains that the salinity modeling in Appendix X considered the cumulative impact of the Proposed Project in addition to 17 other regional restoration sites in the Delta and Suisun Marsh. (LOS 143.) The modeling considered all regional projects with and without the Project and evaluated both scenarios for compliance with D-1641. (LOS 143.) The Court finds that the FEIR sufficiently considered the cumulative impact of other projects.

Petitioners argue that in 2015 the Department found that tidal habitat restoration had an adverse impact on water quality due to increases in bromide. (LOS 362; see also 5654.) The FEIR responded that the current version and configuration of this Project was not known in 2015 and that a more accurate and detailed analysis has been provided for this Project. (LOS 362.) Petitioners have not explained why the FEIR's explanation is insufficient.

Petitioners briefly argue that the planned incremental increase of endangered species in the region was not provided. Petitioners provide no citations to the record and insufficient explanation on what was needed on this issue. They also point to the DEIR's discussion on the cumulative impact on the loss agricultural. (LOS 1401.) The cumulative impact analysis found that while there will be a significant cumulative impact on the loss of farmland, the Project would have a less than significant impact with mitigation and the Project's contribution would be less than cumulatively considerable. (LOS 1401.)

F. Judicial Notice

Respondent and Real Party's request for judicial notice of Exhibits A, B and C is granted.

IV. Conclusion

The Court grants the petition for writ of mandate. The Court finds that Respondent violated CEQA because the FEIR's analysis that the Project will have a less than significant impact on opportunities to fish from the shoreline is not supported by substantial evidence. Petitioners' other contentions are rejected.

A writ of mandate shall issue compelling Respondent to set aside the certification of the FEIR. Any further consideration of the project must comply with this order. Counsel for Petitioners are directed to prepare a writ of mandate consistent with this order.

DATED: November 17, 2022

Hon. Edward G. Weil Judge of the Superior Court

Superior Court of California, Contra Costa County

CV - Martinez-Wakefield Taylor Courthouse 725 Court 5treet Martinez CA 94553 925-608-1000 www.cc-courts.org



K. Bieker Court Executive Officer

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MATTHEW G BULLOCK 455 GOLDEN GATE AVE., STE. 11000 SAN FRANCISCO, CA 94102	
G BRAIDEN CHADWICK 3001 LAVA RIDGE CT., STE. 120 ROSEVILLE, CA 95661	
OSHA R MESERVE 510- 8TH ST. SACRAMENTO, CA 95814	
COREY M MOFFAT 455 GOLDEN GATE AVE., STE. 11000 SAN FRANCISCO, CA 94102	

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K. Bieker Court Executive Officer

KATHRYN L OEHLSCHLAGER 455 MARKET ST., STE. 1500 SAN FRANCISCO, CA 94105

RANDY J RISNER 555 SANTA CLARA ST., 3RD FLOOR VALLEJO, CA 94590

SUPERIOR COURT OF CALIFORNIA, CONTRA COSTA COUNTY

I DECLARE UNDER PENALTY OF PERJURY THAT I AM NOT A PARTY TO THE WITHIN ACTION ØR PROCEEDING; THAT ON THE DATE BELOW INDICATED, I SERVED A COPY OF THE STATEMENT OF DECISION BY DEPOSITING SAID COPY ENCLOSED IN A SEALED ENVELOPE WITH POSTAGE THEREON FULLY PREPAID IN THE UNITED STATES MAIL AT MARTINEZ, CA AS INDICATED ABOVE TO ALL ACTIVE AND DISPOSITIONED PARTIES.

DATE: 11/18/2022