

**RECLAMATION DISTRICT NO. 1601
TWITCHELL ISLAND
BOARD OF TRUSTEES MEETING
TUESDAY, MARCH 18, 2025
9:00 AM
ENGINEER'S REPORT**

**I. PROJECT FUNDING AGREEMENT TW – 24 - 1.0 SP – PHASE I –
SETBACK LEVEE SAN JOAQUIN RIVER**

- A. Received comments to Scope of Work (SOW) from CDFW on 3/10/2025 and no further comments from DWR on 3/10/2025. Responses to comments have been developed and submitted on 3/12/25 approval forthcoming.

EXHIBIT A: SOW Revision 2 to CDFW and email correspondence.

- B. Received the attached approval of request for advance funds on 2/4/2025 in the amount of \$1,090,000 for the District request made on 6/26/2024. Check received on 2/13/24 for \$981,000 which is 90% our request of \$1,090,000.

- C. The second advance request was sent on February 25, 2025.

EXHIBIT B: Advance request sent 2/25 25.

**II. TWITCHELL SETBACK PROJECT POTENTIAL FUNDING FROM DWR
FACILITATING IMPROVEMENT OF SYSTEM WIDE HABITAT (FISH)
PROGRAM**

- A. Review comments received from DWR dated 3/11/25 regarding details associated with the FISH Program.

EXHIBIT C: Email correspondence from Michelle Jesperson with DWR regarding the FISH Program.

III. DISTRICT PUMP STATION SOLAR ARRAY

- A. PGE Interconnection

- a) Interconnection agreement:

1. Awaiting approval on electrical plan updates in response to Sacramento County review. – No update.

- b) Transformer: – No update.

- B. Construction

- a) Site work

1. As-built survey of final pile location conducted and analyzed for final baseplate fabrication and installation. Installation is anticipated within 2 weeks.
2. Pile Cap & Column baseplate submittal under review.
3. Solar Array equipment pad
 - a. Concrete Pad - Installed
 - b. Equipment racking system – Installed
 - c. Inverters and sub-panel - Installed
4. Racking and Panel fabrication continues. Anticipated delivery in early May.

b) Scope Changes – No changes to report

1. Change Order 01 – approved 2/11/25
 - a. WCD 01 – Domestic Content / Safe Harbor procurement.
2. Change Order 02 – approved 2/11/25
 - a. WCD 02 – Provide and Install 100 Ton Riprap to stabilize 3 subgrade locations identified during walkthrough.
 - b. WCD 03 – Expand drainage ditch crossing to install duct bank across drainage ditch withing easement.
 - c. WCD 04 – Provide additional 710 Ton Riprap for expanded un-stabilized sub-grade at unit rate. Removed WCD 02 lump sum directive.
 - d. WCD 05 – Add additional 2,400 Ton Class II - ¾-inch Aggregate.

3. Potential Changes

- a. Transformer upsize: A larger transformer is required for the size of the array. Waiting on PGE Interconnection requirements to determine size requirements.
- b. Transformer location: Depending on PGE Interconnection requirements pole mount vs. pad mount vs. platform mount.
- c. Switchgear location: Modify pump house to mount switchgear inside structure.
- d. Remove Concrete Bollards from Array Columns: Awaiting structural analysis of connection detail to remove this scope.

c) Forecasted Schedule

1. Baseplate fabrication and Installation – 2-weeks
2. Panel, inverters, rough wiring – March
3. Carport racking installation – May.

C. Summary of additional costs:

a) CCO #1 **\$164,046**

1. WCD 01 -	\$164,046
b) CCO #2	\$185,722
1. WCD 02 -	\$13,000
2. WCD 03 -	\$12,000
3. WCD 04 -	\$50,190
4. WCD 05 -	\$110,000

IV. DWR SYSTEMWIDE MULTI-BENEFIT PROJECT FUNDING SCOPE OF WORK

A. Initial permitting and design underway.

V. LEVEE DISTRESS AT LEVEE STATION 60+00 ALONG THREE MILE SLOUGH

A. Review monitoring of sinkhole/crack in Sevenmile Slough Levee on Monday February 12, 2025. Monitoring has shown total movement between ¼ inch to 6 inches overall since start of monitoring on November 20, 2024. Since the last monitoring on December 31, 2024, movement has slowed to 1/8 inch to 1/2 inch. We have chosen to cease any further monitoring at this point

EXHIBIT D: Monitoring Survey dated February 12, 2025

VI. RIVER DELTA CONSULTING – GILBERT COSIO SUMMARY OF ACTIVITIES.

A. Review River Delta Consulting Summary of meetings and activities monitored during the month of February 2025 related to Delta matters including 1) Delta Adapts, 2) Delta Independent Science Board, 3) DPIIC Restoration Forum Planning Committee, 4) Delta Stewardship Council, 5) Delta Protection Commission.

EXHIBIT D: River Delta Consulting Summary of meeting and activities Feb 2025.

EXHIBIT A

Christopher H. Neudeck

From: Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>
Sent: Wednesday, March 12, 2025 4:13 PM
To: Erik E. Almaas
Cc: Jafarnejad, Babak@DWR; Lindsey, Otome@DWR; Christopher H. Neudeck; Donovan, Saskia@DWR
Subject: RE: TW-24-1.0 - Revised SOW

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Erik,

Thank you for putting in the additional language to Section 3.4 Habitat Impacts and Mitigation. I have drafted the approval letter, and it has been sent to my management for review.

Sara M. Taylor (she/her)
Environmental Scientist (Botanist)
Delta Levees Program
Bay-Delta Region
2109 Arch Airport Road, Suite 100
Stockton, CA 95206
(209) 234-3446 (work cell)



From: Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>
Sent: Wednesday, March 12, 2025 1:28 PM
To: Erik E. Almaas <ealmaas@ksninc.com>; Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Lindsey, Otome@DWR <Otome.Lindsey@water.ca.gov>; Chris Neudeck <cneudeck@ksninc.com>
Subject: RE: TW-24-1.0 - Revised SOW

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Erik,

Thank you for submitting the revised SOW.

Saskia

Saskia Donovan, P.E.
Engineer, Water Resources
Delta Levees Special Flood Control Projects
C: (916) 460-0407

From: Erik E. Almaas <ealmaas@ksninc.com>
Sent: Wednesday, March 12, 2025 12:06 PM
To: Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>; Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Lindsey, Otome@DWR <Otome.Lindsey@water.ca.gov>; Chris Neudeck <cneudeck@ksninc.com>
Subject: RE: TW-24-1.0 - Revised SOW

Saskia/Sara,

I added the sentence as per Sara's request. The revised SOW can be downloaded from the following link:

📁 [250312_TW-24-1 Revised SOW to DWR and CDFW](#)

Please let me know if you have any questions. Thanks.

K S KJELDSEN Erik E. Almaas , P.E.
SINNOCK Civil Engineer
NEUDECK

CIVIL ENGINEERS & LAND SURVEYORS
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From: Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>
Sent: Monday, March 10, 2025 11:43 AM
To: Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>; Erik E. Almaas <ealmaas@ksninc.com>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Lindsey, Otome@DWR <Otome.Lindsey@water.ca.gov>; Christopher H. Neudeck <cneudeck@ksninc.com>
Subject: RE: TW-24-1.0 - Revised SOW

Hi Erik,

I just wanted to confirm that DWR has no additional comments on the third SOW version.

We will be completing our internal review process and providing a formal response to the District on the SOW once the final revision has been received.

Thanks,
Saskia

Saskia Donovan, P.E.
Engineer, Water Resources
Delta Levees Special Flood Control Projects
C: (916) 460-0407

From: Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>
Sent: Monday, March 10, 2025 9:54 AM
To: Erik E. Almaas <emaalmaas@ksninc.com>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Lindsey, Otome@DWR <Otome.Lindsey@water.ca.gov>; Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>; Chris Neudeck <cneudeck@ksninc.com>
Subject: RE: TW-24-1.0 - Revised SOW

Hello Erik,

Thank you for the revised TW-24-1.0 SOW. CDFW has one more comment to be addressed, please see below. CDFW will be able to issue a SOW approval once the requested change has been made.

CDFW comments for TW-24-1.0 SOW Revision 2

Page 12, Section 3.4 Habitat Impacts and Mitigation, First Paragraph, Fourth Sentence

- Please add the sentence “Any impacts to AB360 habitat will be mitigated to the satisfaction of CDFW” or re-word the following sentence “If impacts occur to any AB360 program recognized habitat types, the District will mitigate for the loss following the CDFW programmatic requirements: 3:1 for RF, 2:1 for SS, and 1:1 for FM”, to include ‘mitigate to the satisfaction of CDFW’.

Thank you,

Sara M. Taylor (she/her)
Environmental Scientist (Botanist)

Delta Levees Program
Bay-Delta Region
2109 Arch Airport Road, Suite 100
Stockton, CA 95206
(209) 234-3446 (work cell)



From: Erik E. Almaas <ealmaas@ksninc.com>
Sent: Monday, February 24, 2025 11:55 AM
To: Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>; Taylor, Sara@Wildlife <Sara.Taylor@Wildlife.ca.gov>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Lindsey, Otome@DWR <Otome.Lindsey@water.ca.gov>; Christopher H. Neudeck <cneudeck@ksninc.com>
Subject: TW-24-1.0 - Revised SOW

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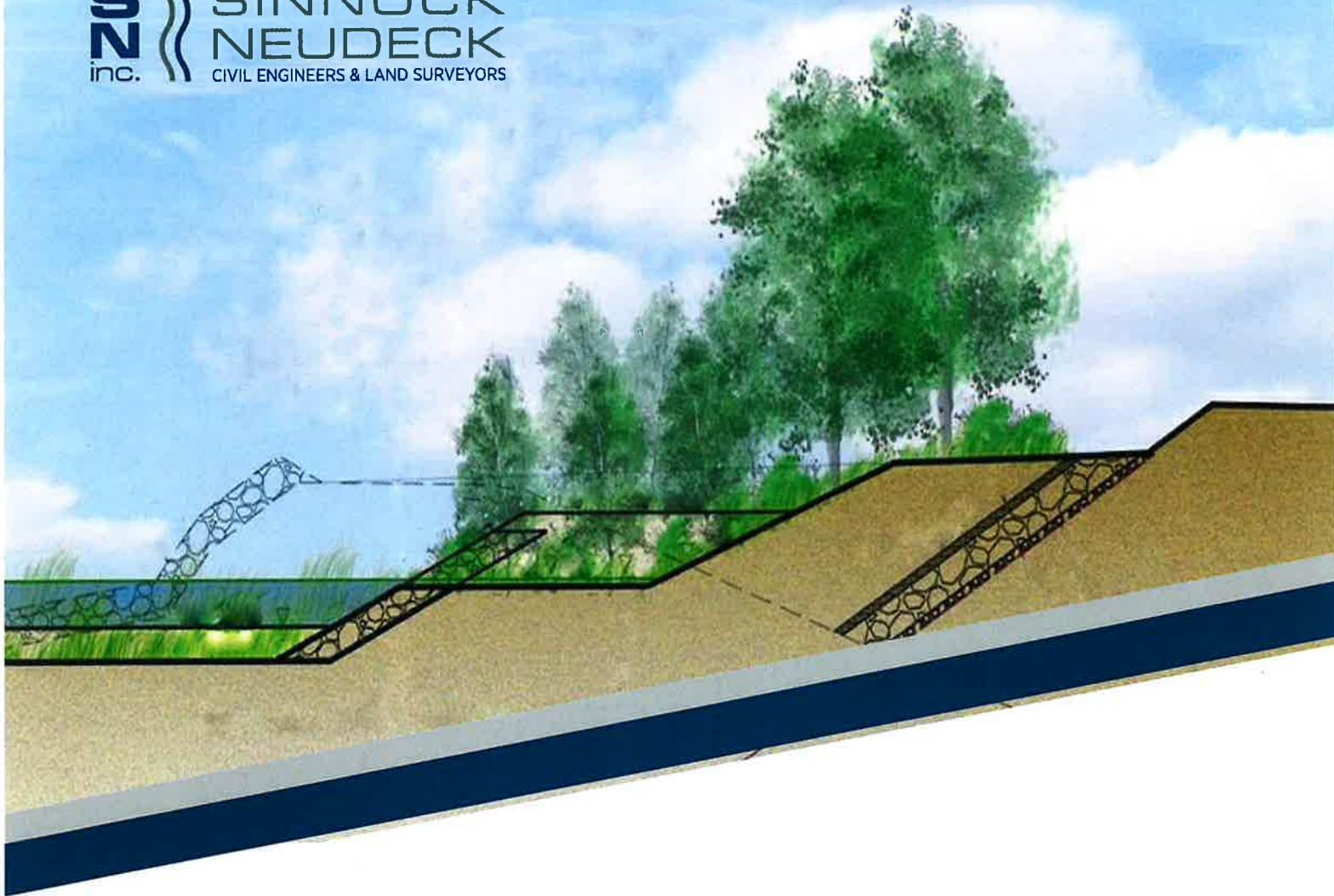
Saskia/Sara,

The District's responses to SOW comments and the revised SOW can be downloaded from the following link:
[250224_TW-24-1 Revised SOW to DWR and CDFW](#)

Please let me know if you have any questions or further comments.

Thanks.

KSN **KJELDSEN** **Erik E. Almaas , P.E.**
SINNOCK *Civil Engineer*
NEUDECK
CIVIL ENGINEERS & LAND SURVEYORS
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The trusted firm for delivering the
right solution for our clients' needs.



2023 Projects Solicitation Package for
Multi-Benefit Projects

Scope of Work

**Reclamation District No. 1601 – Twitchell Island
San Joaquin River Setback Levee – Reach 6**

MARCH 12, 2025 (Rev. 3)

Prepared For

State of California
Department of Water Resources
715 P Street, 6th Floor
Sacramento, CA 95814

Prepared By

Kjeldsen, Sinnock & Neudeck, Inc.
711 N. Pershing Avenue
Stockton, 95203



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APPENDICES

- Appendix A. 2009 GEI Geotechnical Investigation and Evaluation Report
- Appendix B. 2011 ENGEO Geotechnical Peer Review
- Appendix C. 90 Percent Improvement Plans for Phase 1 of Reach 6
- Appendix D. 10 Percent Improvement Plans for Phase 2 of the SJRSLP
- Appendix E. Memorandum and 60 Percent Plans for Phase 3 of the SJRSLP
- Appendix F. Draft Environmental Impact Report
- Appendix G. Final Environmental Impact Report
- Appendix H. CEQA Findings of Fact and Statement of Overriding Considerations
- Appendix I. Mitigation Monitoring and Reporting Program
- Appendix J. Notice of Determination
- Appendix K. Project Permits
- Appendix L. Project Cost Estimate Breakdown
- Appendix M. Project Schedule
- Appendix N. Environmental Information Form
- Appendix O. AB 360 Program Special Projects Pre-Project Information Form



1 INTRODUCTION

Reclamation District No. 1601 – Twitchell Island (District) is responsible for maintaining the levee system and drainage facilities that provide flood protection for primarily agricultural land and infrastructure on Twitchell Island. The District was formed in 1869 and encompasses an area of approximately 3,560 acres within the Delta Primary Zone, surrounded by 11.8 miles of levee. All lands are located within Sacramento County.

The District is located near State Highway Routes 12 and 160 and is bordered by Sevenmile Slough to the north and east, Threemile Slough to the west, and San Joaquin River to the south. Emergency ingress and egress routes are via Sacramento County roads along Sevenmile Slough that provides emergency evacuation to the north via Brannan-Andrus Island and State Highway 12 or to the west via State Highway 160. A vicinity map showing the location of the District is shown in **Figure 1-1**.

1.1 BACKGROUND & PROJECT NEED

The Twitchell Island levee system, and particularly the San Joaquin River levee reach, has a history of levee stability complications including settlement, subsidence, seepage, and slope failure. Deep organic soils and sands in conjunction with adjacent deep waterways and high winds common in the western Delta cause the San Joaquin River levee reach to be extremely vulnerable to erosion and failure, particularly when high winds coincide with high water events which direct significant wave energy and runup at the levees.

The District developed an overall San Joaquin River Setback Levee Project (SJRSPL) that includes rehabilitating over four miles of the District's levee along the San Joaquin River in a manner that will increase the levee's resistance to erosion, provide better overall levee stability, and provide additional freeboard to protect against overtopping due to wind generated waves. Furthermore, the SJRSPL will provide much needed channel margin habitat along this stretch of the San Joaquin River.

The SJRSPL is currently divided into ten reaches. Each reach is approximately ½ mile long and is further divided into three phases. The specific work described within this Scope of Work (SOW) is for Reach 6 of the SJRSPL located between Station 482+00 and Station 508+80. Reach 6 (Project) has been identified as the District's highest priority and the reach with the greatest risk.

1.2 STATE FUNDING HISTORY

This SOW has been prepared in accordance with Project Funding Agreement (PFA) No. TW-24-1.0-SP which was executed on June 19, 2024, between the Department of Water Resources (DWR) and the District. Prior PFAs have authorized funding to the District for engineering, field surveys, environmental evaluation, and permitting of the levee improvements and rehabilitation activities associated with the SJRSPL. As a result of these prior efforts, the environmental documentation in accordance with the California Environmental Quality Act (CEQA), permitting, and preliminary engineering were finalized for the SJRSPL back in 2019.

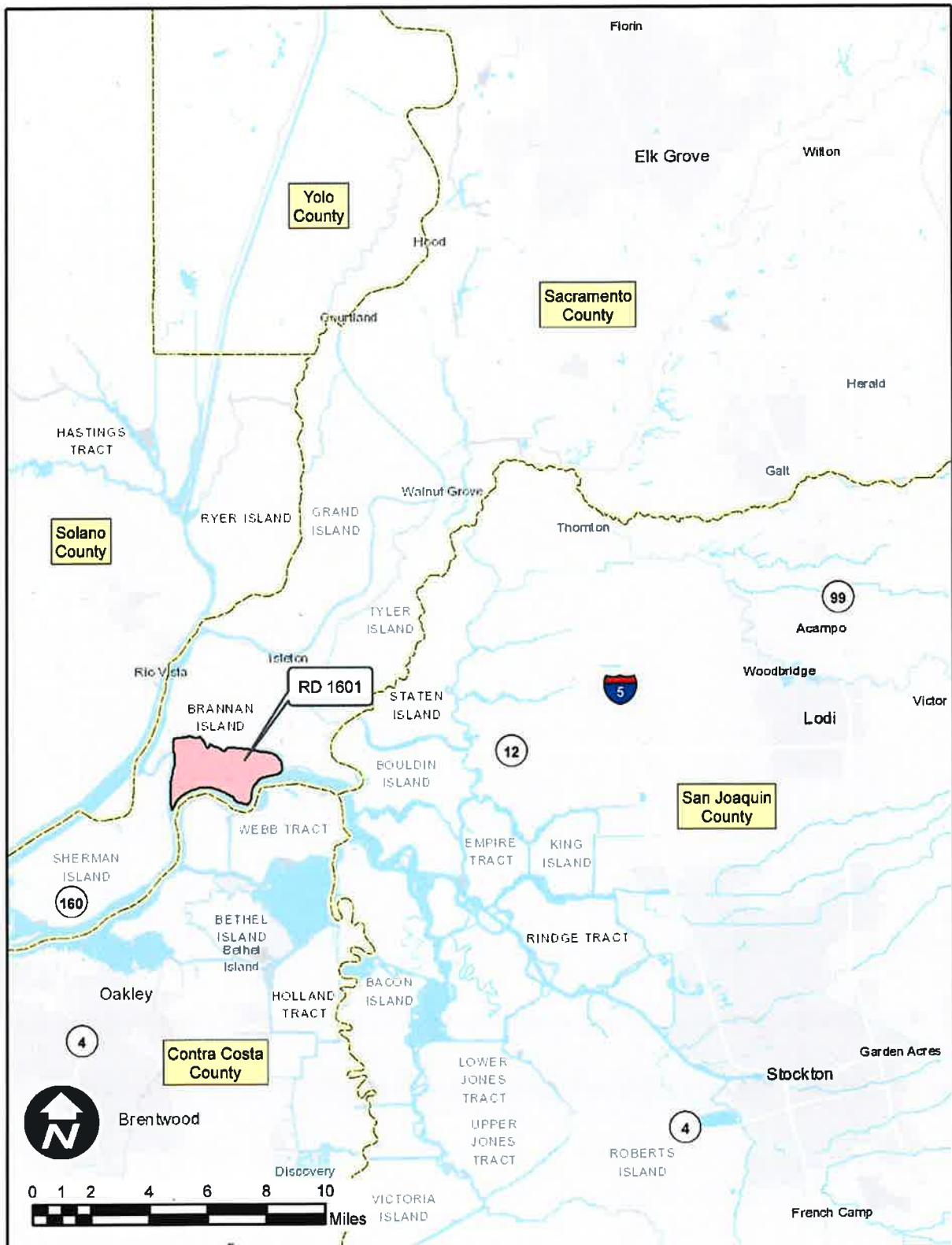


Figure 1-1 - Vicinity Map



1.3 DISTRICT PERSONNEL

District personnel, including consultants involved with the Project, are summarized below in **Table 1-1**.

Table 1-1 - District Personnel

Title	Name	Company
Board of Trustees		
President	Barry Sgarella	RD No. 1601 – Twitchell Island
Trustee	David Huston	RD No. 1601 – Twitchell Island
Trustee	Jasbir Gill	RD No. 1601 – Twitchell Island
District Staff		
Attorney	Jesse Barton	Gallery & Barton
District Engineer	Christopher H. Neudeck	Kjeldsen, Sinnock & Neudeck, Inc.
Secretary	Linda Carter	RD No. 1601 – Twitchell Island
Superintendent	Rick Carter, Jr.	RD No. 1601 – Twitchell Island
Project Consultants		
Project Manager / Civil Lead	Erik Almaas	Kjeldsen, Sinnock & Neudeck, Inc.
Geotechnical Lead / Materials Testing	Cale Crawford	ENGEO, Inc.
Habitat Design Lead / Environmental Compliance	Kelly Fitzgerald-Holland	GEI Consultants
Construction Manager	David Carr	Kjeldsen, Sinnock & Neudeck, Inc.

2 PROJECT DESCRIPTION

The SJRSLP is anticipated to be constructed in multiple stages over the course of many years as funding becomes available. The environmental, permitting, and preliminary engineering components of the SJRSLP have been completed.

2.1 PROJECT OBJECTIVES

The District is currently in the advantageous position of having a shovel-ready, multi-benefit Project that will provide for the following primary objectives:

- to accomplish landside levee improvements that increase the levee's resistance to erosion, provide better overall levee stability, and provide additional freeboard (increased levee height) for an estimated wave run-up of 4.7 feet above the 100-year event water surface elevation.
- to provide channel margin habitat along this stretch of the San Joaquin River.

2.2 PROJECT CONSTRUCTION PHASING

The SJRSLP is currently divided into ten reaches. Each reach is approximately ½ mile long, and most reaches, including Reach 6, are further divided into three phases. The three phases consist of:

- Phase 1: Foundation Toe Berm
- Phase 2: Setback Levee
- Phase 3: Channel Margin Habitat

The specific work described within this SOW is for the District's first priority of the SJRSLP which consists of Reach 6 from Station 482+00 to Station 508+80, as shown in **Figure 2-1**. The three phases of Reach 6 are summarized in **Figure 2-2** and discussed in further detail below.

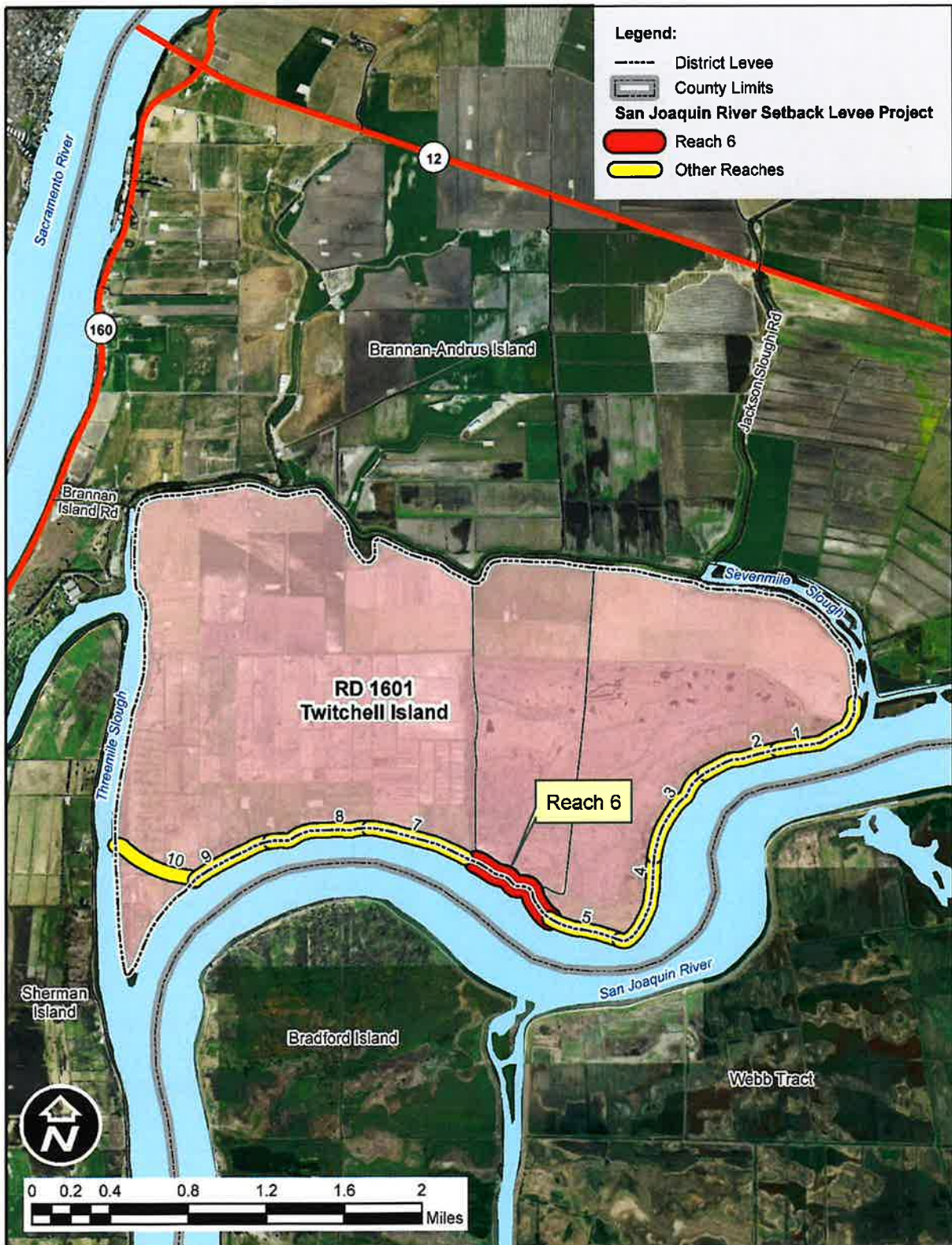


Figure 2-1 - Project Site Map

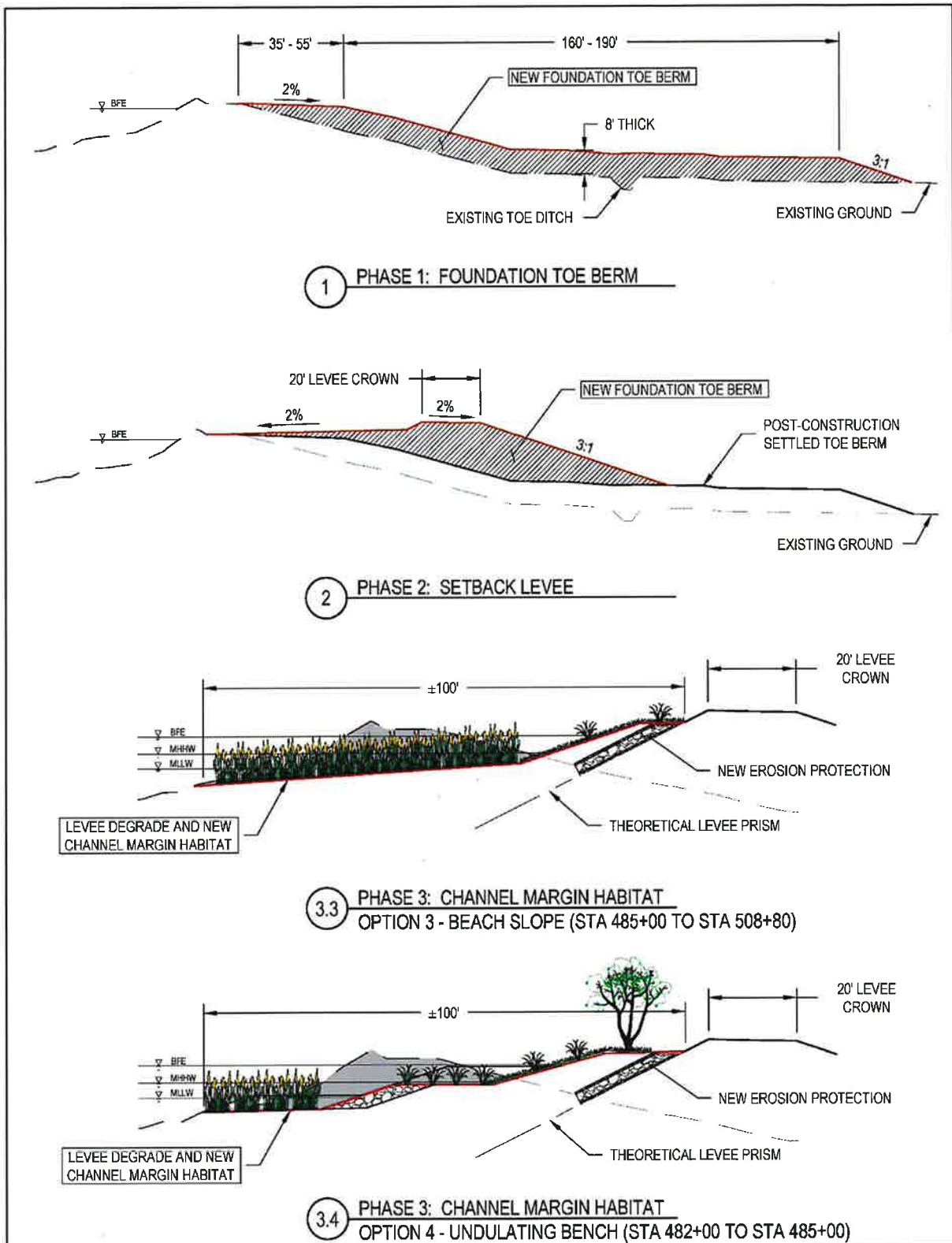


Figure 2-2 - Project Phases



2.2.1 FLOOD PROTECTION

The design of the flood protection features of the SJRSLP are based on the design recommendations described in the "Geotechnical Investigation and Evaluation Report" prepared by GEI Consultants and dated January 2009. A peer review of the GEI report was performed by ENGEO, Inc. on July 18, 2011, which further refined the design. The 2009 GEI report is included as **Appendix A**, and the 2011 ENGEO peer review is included as **Appendix B**.

Phase 1 – Foundation Toe Berm

Phase 1 consists of a substantial toe berm placed on the landside of the existing levee that will consolidate and increase the peat foundation strength and provide stability for new levee embankment construction to allow landside crown widening and raising to be safely performed. The toe berm width generally ranges from 160 feet to 190 feet.

Construction activities will commence with clearing and grubbing operations along with any necessary demolition work. Existing irrigation ditches and toe drains will be "mucked out" and free of highly organic matter prior to the placement of toe berm fill material. The ditches will be relocated to a new alignment outside of the berm footprint.

New fill material will be placed in horizontal lifts against vertical faces keyed into existing levee material. Fill placement will be staged in maximum 3-foot lifts, and placement rates and settlement will be field monitored. Subsequent stages of fill placement will not be placed within three weeks of the previous stage or until the settlement rates under the initial filling show a distinct reduction consistent with substantial completion of consolidation. The total compacted thickness of the berm will be 8 feet thick.

No on-island borrow sites have been identified. Fill material will be delivered to the site from offsite commercially available sources as selected by the contractor. Physical characteristics of the fill material will be tested initially and continuously during placement to ensure compliance with the Project specifications. Compaction testing will also be performed to ensure compliance with the Project compaction requirements.

Approximately five existing Pacific Gas and Electric (PG&E) utility poles have been identified as being impacted by the Project. An application will be prepared and submitted to PG&E, and ultimately, an agreement between the District and PG&E will be executed to allow PG&E to relocate the utility poles to outside the Project footprint. Also, an existing irrigation siphon pipe at Station 489+81 will be reconstructed so that the pipe will align with the new levee lines and grades and extended so that it discharges beyond the Project footprint.

A set of 90-percent improvement plans for Phase 1 for Reach 6 is included as **Appendix C**. As part of the Project, an updated topographic survey will be conducted. The plans for Phase 1 will be revised and refined as necessary, and a final biddable set of plans will be prepared for formal bid solicitation. The plans will be reviewed and approved by DWR and the California Department of Fish and Wildlife (CDFW) prior to construction.

Phase 2 – Setback Levee

Phase 2 consists of the new setback levee. It will be constructed on top of the foundation toe berm immediately behind the existing levee with a levee crown elevation equal to the 100-year base flood elevation plus 4.7 feet of estimated wave run-up plus 0.5 foot for future consolidation



and settlement. The levee crown will be 20 feet wide, the landside slopes will be 3:1 (horizontal:vertical), and the waterside slopes will be 2:1 (horizontal:vertical).

New fill material will be placed in horizontal lifts against vertical faces keyed into existing levee material. All-weather patrol roads will be constructed with 3/4-inch Class 2 aggregate base at the levee crown and toe. Rock slope protection consisting of quarry stone riprap will be constructed on the waterside of the theoretical levee prism and buried.

A set of 10-percent conceptual design plans for Phase 2 of the SJRSLP are included as **Appendix D**. Prior to construction of Phase 2 of Reach 6, a limited topographic survey will be performed in order to incorporate the new toe berm into the Phase 2 design. Using the 10-percent conceptual design and the new survey data, a final biddable set of plans for Phase 2 will be prepared for formal bid solicitation. The plans will be reviewed and approved by DWR and CDFW prior to construction

2.2.2 HABITAT DEVELOPMENT

Phase 3 – Channel Margin Habitat

Phase 3 consists of the proposed waterside habitat design. Ultimately, the District intends to create channel margin habitat along four miles of its levee along the San Joaquin River as part of its SJRSLP. The primary design objective is the creation of a diverse range of channel margin habitat structures and shaded riverine aquatic habitats, and their associated ecological functions and target species benefits. A secondary objective is the creation of a continuous corridor of riparian and upland scrub habitats having a diversity of botanical species and canopy structure.

To achieve these objectives, another essential objective is to design structures and habitats that can withstand the erosive forces of chronic ship/boat wakes and wind waves, and the occasional high energy storm waves, with minimal loss of substrate, soil and vegetation and the ability to recover from infrequent storm-related damage.

Five design options to ultimately create a mosaic of three different habitat types (tule marsh and mudflat; riparian forest and scrub; and upland scrub and grassland) were developed for the SJRSLP. The design of Reach 6 includes two of the five options as summarized below in **Table 2-1**.

Table 2-1 - Habitat Design Options

Station Begin	Station End	Length (feet)	Habitat Design Option	
			No.	Description
482+00	485+00	300	4	Undulating bench with scalloped bankline
485+00	508+80	2,380	3	Beach slope with tule band

Option No. 3 includes a stable, gentle 15:1 beach slope within, and four feet below, the intertidal range where wind waves occur most frequently. The beach slope will incorporate a continuous 75-foot-wide band of tule marsh and an upland slope and bench consisting of dense willow scrub and upland scrub. A typical cross section of Habitat Design Option No. 3 is shown below in **Figure 2-3**.

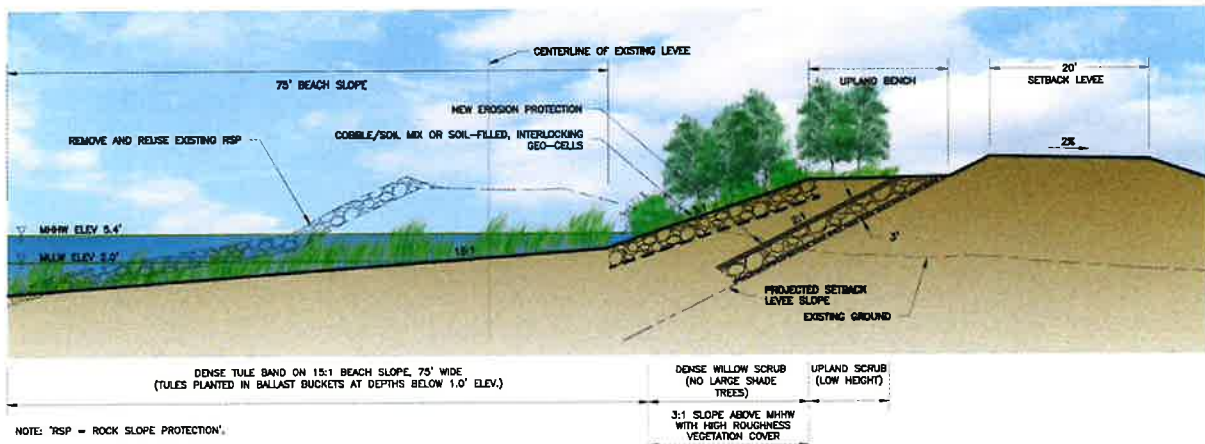


Figure 2-3 - Habitat Design Option No. 3: Beach Slope with Tule Band – Typical Section

Option No. 4 includes variable height lower and middle benches in wave form that create a sinuous shoreline with pronounced in-and-out variation as tide levels intersect the variable height of the middle and lower benches. The upper levels of the middle bench will support mixed riparian forest and tall shade trees, while the lower dips will be a combination of shallow mudflat and alder/willow scrub close to the water surface. The lower bench will support a band of tule marsh. A typical cross section of Habitat Design Option No. 4 is shown below in **Figure 2-4**.

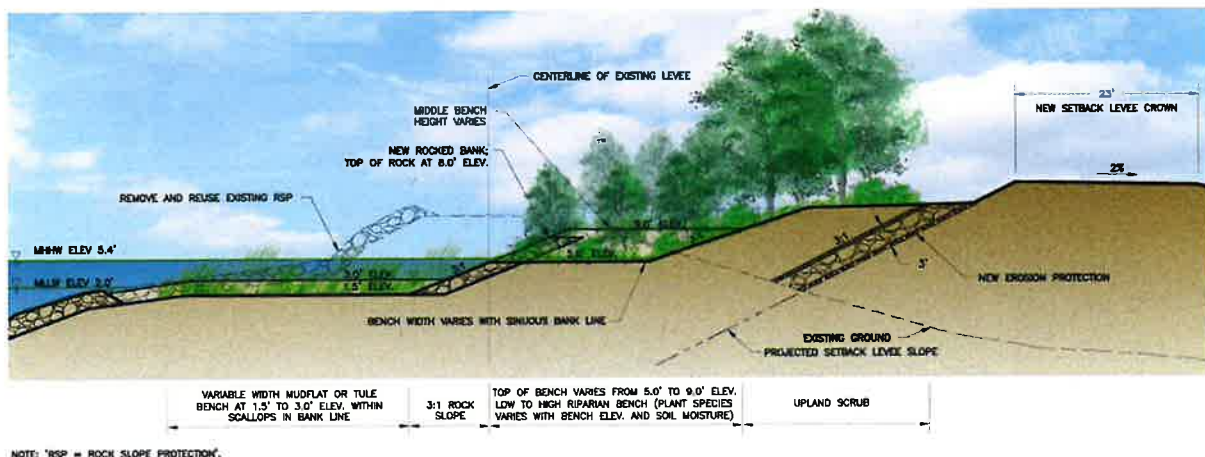


Figure 2-4 - Habitat Design Option No. 4: Undulating Bench with Scalloped Bankline – Typical Section

The remnant levee will first be degraded and reshaped as necessary to provide the lines and grades to support planting. Planting will occur and be maintained for one year during the Establishment Period. A three-year Performance Period will follow with funding from a separate, future PFA.

A memorandum and a set of 60 percent plans for Phase 3 of the SJRSLP are included in **Appendix E** for further reference. Upon completion of the Phase 2 design, the Phase 3 design for Reach 6 will be finalized, and a final biddable set of grading and planting plans for Phase 3



will be prepared for formal bid solicitation. The plans will be reviewed and approved by DWR and CDFW prior to construction.



3 CEQA / PERMITTING / MITIGATION

All CEQA compliance and permitting work for the SJRSLP was completed under a prior PFA.

3.1 CEQA COMPLIANCE

An Environmental Impact Report (EIR) was completed, and a Notice of Determination (NOD) was filed in 2015.

The EIR identifies potential jurisdictional waters of the United States and waters of the State occurring on the Project site, including freshwater emergent wetland, willow scrub wetland, and irrigation/drainage ditches. Project construction will result in the permanent removal (because of the direct filling) of potential USACE-jurisdictional waters of the United States, waters of the State, and riparian habitat (i.e., willow scrub wetland). Also, construction of the proposed Project will result in the permanent removal of existing vegetation and cover types that are suitable for special-status plants.

The Draft EIR is included as **Appendix F**, the Final EIR is included as **Appendix G**, the CEQA Findings of Fact and Statement of Overriding Considerations are included as **Appendix H**, the Mitigation Monitoring and Reporting Program (MMRP) is included as **Appendix I**, and the NOD is included as **Appendix J**.

3.2 PERMITTING

Permitting has also been completed. A summary of the permitting effort is as follows:

- U.S. Army Corps of Engineers, Section 404 Individual Permit and River and Harbors Section 10 Permit
- Endangered Species Act Section 7 Compliance
 - U.S. Fish and Wildlife Service Biological Opinion
 - National Marine Fisheries Service Biological Opinion
- Central Valley Regional Water Quality Control Board, Section 401 Water Quality Certification
- CDFW, Section 1602 Lake and Streambed Alteration Agreement (LSAA)
- Section 106 of the National Historic Preservation Act Compliance

The District had previously been granted a five-year extension for its LSAA, and it is currently set to expire on December 31, 2024. CDFW recently informed the District that an additional extension will not be allowed beyond this date. As such, the District will be applying for a new LSAA as part of this SOW.

The Project permits are included as **Appendix K**.

3.3 ENVIRONMENTAL COMPLIANCE AND MONITORING

The MMRP and various permits describe measures to ensure environmental compliance. Prior to construction, worker environmental awareness program (WEAP) training will be conducted to provide awareness to workers of the ecological values of the site, including the potential for

EXHIBIT B

February 25, 2025

Mr. Bobby Jafarnejad, Manager
Delta Levees Program – Special Projects
Department of Water Resources
715 P Street, 6th Floor
Sacramento, CA 95814

Re: Reclamation District No. 1601 – Twitchell Island
San Joaquin River Setback Levee – Reach 6
Project Funding Agreement No. TW-24-1.0
Advance Request – 2025 Q3 & Q4

Dear Mr. Jafarnejad,

On behalf of Reclamation District No. 1601 – Twitchell Island (District), Kjeldsen, Sinnock & Neudeck, Inc. (KSN) hereby submits this request for advance funds for the referenced project for the third and fourth quarters of 2025. Project Funding Agreement (PFA) No. TW-24-1.0 was executed on June 19, 2024, and provides for funding of 95 percent by the Department of Water Resources (DWR) up to a maximum total amount of \$15,000,000 and allows for advance payments of up to 90 percent.

In anticipation of the forthcoming expenses related to the project over the next six months, the District requests an advance of **\$110,000**. Expected tasks to be performed during this period include, but are not limited to, the following:

- **Project Management**: General project management; identify and secure additional project funding.
- **Grant Management**: General grant management.
- **Utility Relocation**: Relocation of utility poles by PG&E.
- **Phase 1 – Toe Berm – Bidding / Contracting**: Bid solicitation; bid opening; construction contract administration.

The budget for the six-month period is summarized below in **Table 1**.

Table 1 - Six-Month Budget - 2025 Q3 & Q4

Expense	2025 Q3			2025 Q4		
	July	August	September	October	November	December
Project Management	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Grant Management	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Utility Relocation						\$75,000
<i>Phase 1 – Toe Berm</i>						
Bidding / Contracting	\$17,000	\$4,000	\$2,000			
Totals:	\$19,000	\$6,000	\$4,000	\$2,000	\$2,000	\$77,000

Previous requests for advance funds have been made by the District and are summarized below in **Table 2**. Please note that the District is **not** planning to submit a request for advance funds for 2025 Q1 & Q2.



Table 2 - Summary of Requests for Advance Funds

6-Month Request Period		Amount Requested by District	Amount Approved by DWR
2024	Q3 & Q4	\$1,090,000	\$1,090,000
2025	Q1 & Q2	\$0	\$0
	Q3 & Q4	\$110,000	
Totals:		\$1,200,000	\$1,090,000

Thank you in advance for your prompt review and approval of this request for advance funds. Should you have any questions, please do not hesitate to contact me at (209) 946-0268 or eealmaas@ksninc.com.

Sincerely,

KJELDSSEN, SINNOCK & NEUDECK, INC.

Erik Almaas, P.E.
Project Manager

cc: Andrea Lobato, Manager, Delta Levees Program
Perla A. Tzintzun-Garibay, Butterfield + Co.
Jesse Barton, District Counsel
Linda Carter, District Secretary
Christopher H. Neudeck, District Engineer

EXHIBIT C

Christopher H. Neudeck

From: Jesperson, Michelle@DWR <Michelle.Jesperson@water.ca.gov>
Sent: Tuesday, March 11, 2025 4:49 PM
To: jbarton@gallerybartonlaw.com
Cc: Jafarnejad, Babak@DWR; Erik E. Almaas; Brock, Bryan@DWR; Julian, David@DWR (he/him); Donovan, Saskia@DWR; Edjan, Phoebee@DWR; Christopher H. Neudeck
Subject: RE: Twitchell Setback Project Potential Funding

You don't often get email from michelle.jesperson@water.ca.gov. [Learn why this is important](#)

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Hi Jesse, Thank you for providing your concerns in writing regarding the opportunity for RD 1601 to receive up to \$15 million from the Facilitating Improvement of Systemwide Habitat Program for implementation of a new reach of the Twitchell Island Setback Levee project.

I'm writing to provide additional information on the issues raised – please see responses below. Members of the DWR team are willing to meet to discuss further prior to the March 18 RD board meeting if needed.

1. Current lack for advance payments

DWR Response: The Facilitating Improvement of Systemwide Habitat (FISH) Program Funding Guidelines are currently being revised to include advanced pay provisions. Final guidelines are expected within the next several weeks. You can view the draft advanced pay provisions that were posted for public review. The advanced pay provisions in the final FISH guidelines will not be substantively different than the public review draft, meaning, they can be considered close enough to the final guidelines to get a sense of the provisions that will apply to any future funding agreements with FISH Program funding. The advanced pay public review draft can be found here: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/News/Public-Notices/FISH-Guidelines-8-13-24.pdf>

2. Currently lacking contract for review

DWR Response: If the RD is willing to commit to pursuing the project, DWR staff will work with RD to develop a funding agreement. A draft scope of work, budget and schedule from the RD is needed to begin drafting the agreement. An example of a recently executed funding agreement using FISH Program funding can be provided if the RD is interested in reviewing an example.

3. Lack of clarity on various deadlines

DWR Response: Since the RD meeting on 2/18, DWR staff determined this funding agreement will not subject be subject to the previous March deadline; however, we are still under an accelerated timeline to execute a funding agreement before 6/30/2025 to ensure the funds can be assigned to

the funding agreement prior to the commitment deadline for the funding. If the RD is willing to commit to pursuing the project, we will provide a more concrete schedule for agreement development and execution.

4. Apparent expiration of funds in June of 2027, when this is a three-year project

DWR Response: The current constraints of the funding require all funds to be liquidated by 6/30/2027. DWR staff are pursuing options to extend the current funding deadline; however, extensions of the funding require approval by the Legislature so cannot be guaranteed. We will have more certainty about the likelihood of funding liquidation being extended in the May-June time frame. DWR staff are willing to work with the RD to craft the funding agreement to reflect the current schedule of work that can be accomplished within the current funding constraints. The RD will not be expected to complete year 3 of the project if the funding is not available past 6/30/2027.

5. Lack of clarity on when funds can be received and spent.

DWR Response: Please see draft advanced pay provisions and responses above. The funding agreement will stipulate conditions of disbursement of funding. Typically for project construction, the funding recipient will need to demonstrate environmental compliance and permitting has been completed and that Delta Stewardship Council consistency certification has been received prior to disbursement of funds for construction. However, if funding is needed to complete final planning, permitting and DSC certification, the funding agreement could include these tasks in the scope of work to support RD expenses related to completing these tasks. Regarding invoicing for advanced payments, the DWR grant manager assigned to this project will strive for timely processing of payments. We can also pursue timely release of retention based on milestone completion (vs. total project completion).

Thanks,
Michelle

Michelle Jesperson (she/her)
Environmental Program Manager
California Department of Water Resources
916-873-4035

From: jbarton@gallerybartonlaw.com <jbarton@gallerybartonlaw.com>
Sent: Wednesday, February 19, 2025 7:23 AM
To: Jesperson, Michelle@DWR <Michelle.Jesperson@water.ca.gov>
Cc: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Erik E. Almaas <ealmaas@ksninc.com>; Brock, Bryan@DWR <Bryan.Brock@water.ca.gov>; Julian, David@DWR (he/him) <David.Julian@water.ca.gov>; Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>; Edjan, Phoebee@DWR <Phoebee.Edjan@water.ca.gov>; Chris Neudeck <cneudeck@ksninc.com>
Subject: RE: Twitchell Setback Project Potential Funding

You don't often get email from jbarton@gallerybartonlaw.com. [Learn why this is important](#)

Good morning Michelle:

Following up from yesterday's meeting, the primary sticking points on this new funding source are as follows:

1. Current lack for advance payments
2. Currently lacking contract for review
3. Lack of clarity on various deadlines
4. Apparent expiration of funds in June of 2027, when this is a three-year project
5. Lack of clarity on when funds can be received and spent.

If these issues can be resolved/clarified by RD1601's March 18 meeting, the Board will be in a better position to make a decision on whether to pursue these funds.

Thank you,

Jesse W. Barton
Gallery & Barton, APLC
1112 I Street, Suite 370
Sacramento, CA 95814
T: (916) 444-2880
F: (916) 444-6915

*** ATTENTION ***

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From: Jespersion, Michelle@DWR <Michelle.Jespersion@water.ca.gov>

Sent: Thursday, February 13, 2025 4:09 PM

To: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>; Erik E. Almaas <[eemaalmaas@ksninc.com](mailto:emaalmaas@ksninc.com)>; Gill, Jasbir@DWR <Jasbir.Gill@water.ca.gov>; Brock, Bryan@DWR <Bryan.Brock@water.ca.gov>; Julian, David@DWR (he/him) <David.Julian@water.ca.gov>; Donovan, Saskia@DWR <Saskia.Donovan@water.ca.gov>; Edjian, Phoebee@DWR <Phoebee.Edjian@water.ca.gov>

Cc: Christopher H. Neudeck <cneudeck@ksninc.com>

Subject: RE: Twitchell Setback Project Potential Funding

You don't often get email from michelle.jespersion@water.ca.gov. [Learn why this is important](#)

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi all, Following up from the meeting this morning, here are the Facilitating Improvement of Systemwide Habitat (FISH) Program Funding Guidelines. As Bryan mentioned, these guidelines are being updated to include advanced payment provisions. We are very close to having these finalized and will share the updated version as soon as it is available.

Can someone send me the meeting invite or call-in information for the RD meeting on 2/18 morning?

Thanks,
Michelle

Michelle Jesperson (she/her)
Environmental Program Manager
California Department of Water Resources
916-873-4035

-----Original Appointment-----

From: Jafarnejad, Babak@DWR <Babak.Jafarnejad@water.ca.gov>

Sent: Thursday, February 6, 2025 11:22 AM

To: Jafarnejad, Babak@DWR; Erik E. Almaas; Gill, Jasbir@DWR; Brock, Bryan@DWR; Jesperson, Michelle@DWR; Julian, David@DWR (he/him); Donovan, Saskia@DWR; Edjan, Phoebee@DWR; NRRHQ 07-215 (McCloud Room)

Cc: Chris Neudeck

Subject: Twitchell Setback Project Potential Funding

When: Thursday, February 13, 2025 10:00 AM-11:00 AM (UTC-08:00) Pacific Time (US & Canada).

Where: Microsoft Teams Meeting

This meeting is set up to discuss a potential funding opportunity for another reach of the Twitchell Island Setback Levee Project.

Microsoft Teams [Need help?](#)

[Join the meeting now](#)

Meeting ID: 256 227 813 261

Passcode: 3z9o2nb2

Dial in by phone

[+1 916-573-2034](tel:+1916-573-2034) „581791797# United States, Sacramento

[Find a local number](#)

Phone conference ID: 581 791 797#

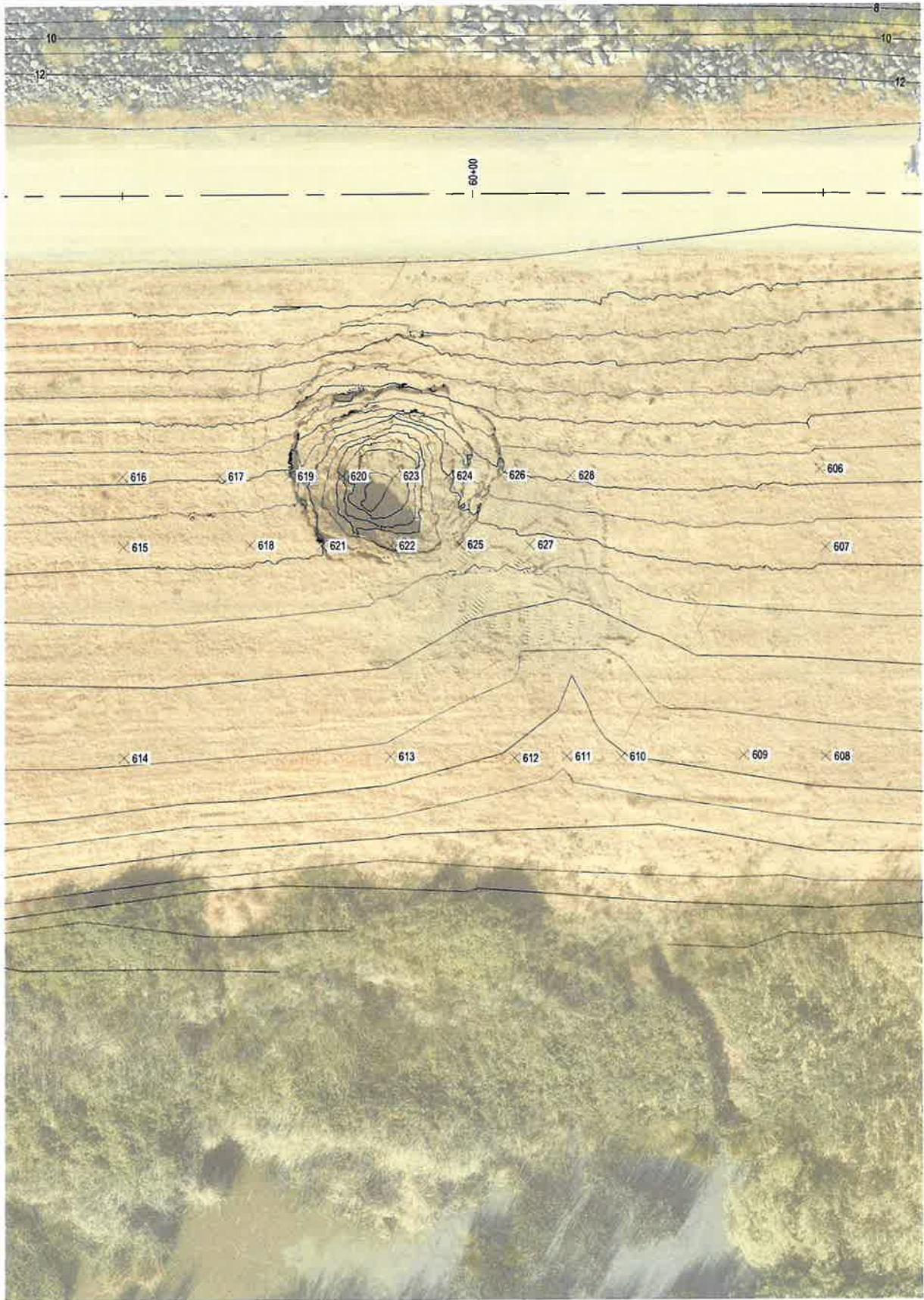
For organizers: [Meeting options](#) [Reset dial-in PIN](#)



Welcome to the California Natural Resources Agency and affiliated organizations online meeting system. Enjoy your meeting.

EXHIBIT D

FILE SPEC: P:\1110_Twitchell_Island\1090_Sinkhole_Sta_60+00\08_Civil\400_Plans\020_CAD\Exhibits\Exn_Monitoring Points.dwg
PLOT DATE: Feb 26, 2025 - 5:31am



POINT NO.	INCREMENTAL ELEVATION CHANGE (FEET)															TOTAL ELEVATION CHANGE (FEET)
	11/12/2024	11/20/2024	11/26/2024	12/9/2024	12/17/2024	12/23/2024	12/31/2024	2/12/2025								
606		(0.01)	0.01	(0.01)	0.01	(0.01)	0.00	(0.01)								(0.02)
607		0.00	0.00	(0.01)	0.01	(0.01)	0.00	(0.01)								(0.02)
608		(0.01)	0.00	(0.01)	0.00	0.00	(0.01)	0.00								(0.03)
609		(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)								(0.04)
610		(0.02)	0.00	(0.03)	0.00	(0.02)	(0.01)	(0.03)								(0.11)
611		(0.01)	0.00	(0.04)	(0.01)	(0.01)	(0.02)	(0.05)								(0.14)
612		(0.01)	(0.01)	(0.04)	0.01	(0.02)	(0.02)	(0.04)								(0.13)
613		(0.01)	0.00	(0.02)	0.00	(0.01)	(0.01)	(0.02)								(0.07)
614		(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)								(0.04)
615		(0.01)	0.02	(0.01)	0.01	(0.02)	0.00	0.00								(0.01)
616		0.00	0.00	(0.01)	0.02	(0.02)	0.01	(0.01)								(0.01)
617		0.00	0.00	(0.01)	0.01	(0.01)	(0.01)	0.00								(0.02)
618		0.00	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)								(0.03)
619		(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.02)								(0.05)
620		(0.02)	(0.01)	(0.02)	0.01	(0.02)	0.00	(0.02)								(0.08)
621		(0.01)	(0.01)	(0.02)	0.01	(0.01)	(0.01)	(0.01)								(0.06)
622		(0.05)	(0.02)	(0.04)	0.00	(0.01)	(0.01)	(0.02)								(0.15)
623		(0.04)	(0.01)	(0.03)	0.00	(0.01)	(0.01)	(0.01)								(0.11)
624		(0.05)	(0.01)	(0.04)	0.00	(0.01)	(0.01)	(0.02)								(0.14)
625		(0.21)	(0.08)	(0.11)	(0.02)	(0.03)	(0.03)	(0.04)								(0.52)
626		(0.03)	(0.01)	(0.03)	(0.01)	(0.01)	(0.01)	(0.02)								(0.12)
627		(0.03)	(0.02)	(0.05)	(0.01)	(0.02)	(0.02)	(0.02)								(0.17)
628		(0.01)	(0.01)	(0.02)	0.00	(0.01)	(0.01)	(0.01)								(0.07)

NOTES:

1. MONITORING POINTS WERE SET AND INITIAL SURVEY WAS PERFORMED ON 11/12/2024.
2. THE INCREMENTAL ELEVATION CHANGE FOR EACH SURVEY DATE REPRESENTS THE VERTICAL DIFFERENCE SINCE THE PRIOR SURVEY.

NORTH ORIENTATION

KJELDSEN
SINNOCK
NEUDECK

CIVIL ENGINEERS & LAND SURVEYORS

www.ksninc.com

711 N. Pershing Avenue
Stockton, CA 95203
209-946-0268

1550 Harbor Blvd., Suite 212
West Sacramento, CA 95691
916-403-5900

RECLAMATION DISTRICT NO. 1601
EMERGENCY SINKHOLE REPAIR AT STA 60+00
POST-CONSTRUCTION SETTLEMENT MONITORING
SURVEY DATE: 2/12/2024

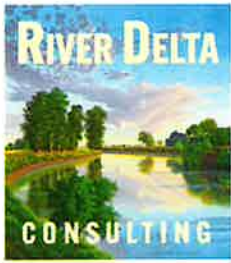
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1" = 10'

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0 1/2" 1"

EXHIBIT NO.
1

PAGE NO.
1

EXHIBIT E



MEMORANDUM

March 11, 2025

TO: Chris Neudeck
FROM: Gilbert Cosio
SUBJECT: Summary of Delta Items Addressed in February 2025

Chris,

Following is a summary of meetings and other activity being monitored during February. Let me know if you have any questions, or would like to discuss in more detail.

Delta Adapts – Comments to the Delta Adapts Plan were due February 18. We provided Comments which are attached. Also attached are comments submitted by the California Central Valley Flood Control Association. The draft plan is a very high-level conceptual plan, so the comments are more general than you might expect.

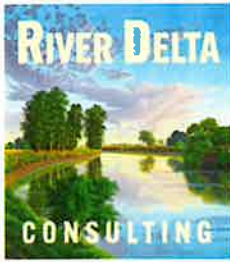
Delta Independent Science Board – One of the main items on DISB agenda was discussion of the DISB comments to the Draft Delta Adapts Plan. The comments are quite extensive. The main concerns raised include more development of some recommendations, lack of detail for certain strategies, lack of prioritization, and the time frame to complete the work is too short.

DPIIC Restoration Forum Planning Committee – The DPIIC Restoration Forum Planning Committee held a meeting on February 25. The purpose was to begin discussion on the 2025 Restoration Forum. The Forum is tentatively scheduled for the first week of May, or first week of June. The Forum will take place in Clarksburg 3-7 PM. The Forum will start at the 1883 Historic Schoolhouse. The first part of the Forum will be an open house and short presentations describing highlighted projects. The meeting will then transition to Husick's for a happy hour and continued networking.

Delta Stewardship Council – The DSC meeting included general reports and did not address any critical items of interest. Significant time was spent discussing the myriad of bills introduced in the legislature. Many of the bills are spot bills which will be evaluated and discussed in more detail as details are added to the bills. Ongoing DSC Board member meetings with legislators were discussed.

Delta Protection Commission – Bruce Blodgett has left the DPC. While the DPC searches for a permanent replacement, Dan Ray has been named as the interim Executive Director. We have worked with Dan over the years during his time as Chief Deputy Executive Office of the DSC, the Delta Levees Program, the Bay-Delta Authority and CALFED.

Thanks,



February 18, 2025

Sent Via Electronic Transmittal: climatechange@deltacouncil.ca.gov

Delta Stewardship Council
715 P Street, 15-300
Sacramento, CA 95814

ATTN: Morgan Chow,
Environmental Program Manager
Climate Change and Environmental Justice Unit

Subject: Comments on the Delta Adapts Draft Adaptation Plan

Dear Ms. Chow:

Thank you for the opportunity to comment on the Delta Stewardship Council's Delta Adapts Draft Adaptation Plan (Plan). These comments are submitted on behalf of a number of Delta Reclamation Districts and water agencies. Since the Plan introduces and describes a tremendous number of policies and strategies, I will keep my comments at a high level by addressing financial considerations, unique Delta flood considerations, and opportunities for habitat restoration.

Financial Considerations

The Plan describes the potential costs of levee improvements (\$3.3 billion) and habitat restoration (\$5.2 billion). In addition, the Plan assumes that all levees will be improved to the Bulletin 192-82 levee design requirement prior to investment of the Plan's \$8.5 billion price tag for levee improvements and habitat restoration. The Plan also describes that the main economic base of the Delta, agriculture, must be sustainable. The Plan should consider how the initial levee improvements to the reach the Bulletin 192-82 levee design can be funded, and how additional levee improvements due to sea level rise and climate change can be funded. It should also describe the impact habitat restoration will have on the agricultural acreage that produces funds for levee maintenance and rehabilitation. Finally, the Plan should describe the critical mass, or the magnitude of acreage that must be maintained in agriculture in order for agriculture and the Delta economy to be sustainable.

Bulletin 192-82 is a report describing the results of 10 years of levee analyses and design performed by DWR, the Corps of Engineers and local reclamation districts following the 1972 levee breach of the Brannan-Andrus Levee Maintenance District's San Joaquin River levee that

threatened to flood the town of Isleton, and required DWR to release 300,000 acre-feet of water from storage in order to repel salt from entering the central Delta. In the past few years, local RD's estimated a cost of \$1.5 billion to rehabilitate all Delta levees to the Bulletin 192-82 standard.

In the early 1990's several studies were performed to estimate agricultural reclamation districts' ability to pay for levee rehabilitation to the Bulletin 192-82 standard. The results indicated that agricultural reclamation districts had little, if any, ability to pay. Funding for levee rehabilitation comes from the Delta Levees Special Projects Program. The Delta Levees Maintenance Subventions Program has been assisting reclamation districts with levee maintenance since 1973. However, currently, only the 2025-26 Subventions Program is funded. Proposition 4 (November 2024) includes \$150,000,000 for Delta levees which is enough to fund the Subventions Program for about 6 years. With no other funding in sight, attaining the Bulletin 192-82 standard on all levees will take a number of years. Does the Plan take into account a particular time frame in which Bulletin 192-82 rehabilitation will be reached and how many years future levee improvements will take in order to keep up with sea level rise and climate change?

Flood Characteristics and Opportunities for Habitat Restoration

The Delta's unique flood characteristics include very little true riverine floodplain. As a result, typical floodplain improvements such as setback levees and increasing flood plain acreages may not provide the flood risk reduction results that the Plan appears to assume. As a result, habitat restoration opportunities are very much more limited in the Delta than upstream in the watershed.

The Delta flood characteristics are dominated by tidal action, even during high water events. Even if the water surface is not totally moving up and down with the tide, the backwater effects of the tides impact the flood elevations upstream. When the tidal effects impact flood water surface elevations, the channel is not the main source of control so enlarging the channel by setting back levees may not have a significant effect on the water surface elevation. In addition, in some locations, setback levees could cause increased tidal exchange and cause salt water to migrate upstream.

Many of the current, or planned, levee setbacks are located in areas where the additional floodplain will only provide transitory storage and reduced flood risk is limited to the immediate area of the channel improvements, and not necessarily very far upstream or downstream.

The Plan describes case studies of recently completed projects and their potential to translate to similar projects in the Delta. On Page 4-10, the Plan describes the Dos Rios Ranch case study and that the effort has "significantly reduced flood risk". Flood risk may be reduced in the immediate area of the setback levee, but flood improvements do not translate very far upstream or downstream. The Dos Rios case study goes on to make the statement: "...Delta practitioners have much to learn from the successes at the Dos Rios Ranch Preserve." This statement seems inappropriate for a document such as this. There is no doubt the Dos Rios Project is a great project for ecosystem and floodplain restoration, but the actual risk reduction of the San Joaquin River flood system will be very localized. In addition, as described below, the opportunity for such a project in the Delta is limited in nature.

There are habitat opportunities in the Delta. Figure 4-5 (attached) of the Delta Plan's revised Chapter 4 illustrates potential areas for habitat restoration using ground surface elevations to describe areas and the type of habitat that each elevation band could support. The areas on the figure that are white represent deeply subsided land and thus would not provide habitat improvement. The blue band illustrates the shallow subtidal elevations, which also do not support valuable habitat. A very narrow intertidal elevation band is shown in brown. The most valuable habitat could be created in the light green band that is labeled as the sea level rise accommodation band, and in the yellow band which is the floodplain elevation band. As can be seen in Figure 4-5, the yellow and light green bands are the opportunity areas for significant habitat restoration, but the vast majority of the Delta lands are outside of these two opportunity areas. In addition, the brown, light green and yellow bands along the east side of the Delta are not accessible between Thornton and Stockton without having to breach levees and create deeply subsided flooded areas.

In general, the opportunities for increase of floodplain and floodplain habitat in Delta, outside of the Yolo Bypass and the Cosumnes River Preserve, are generally limited to the areas upstream of Clarksburg on the Sacramento side, and upstream of Lathrop on the San Joaquin side.

Another potential location for habitat restoration can be in the form of channel margin habitat on the waterside slopes of levees with the understanding that the levees have to be of significant girth that the habitat will not impact the structural integrity of the levee, or the ability of the local levee maintaining agency to properly maintain the levee. Studies of these larger levees have been performed over the past few years. These large levee designs will also increase the ability of the levees to resist earthquake forces. Perhaps in future Delta Adapts Plans, the cost and beneficial location of these larger levees will be investigated and presented.

Thank you for the opportunity to present these comments. If you have any questions, or would like additional information, please contact me at gcosio@river-deltaconsulting.com, or (916) 761-1282.

Sincerely,
RIVER DELTA CONSULTING

A handwritten signature in black ink, appearing to read 'Gilbert Cosio Jr.', with a stylized flourish at the end.

By: Gilbert Cosio Jr., P. E.

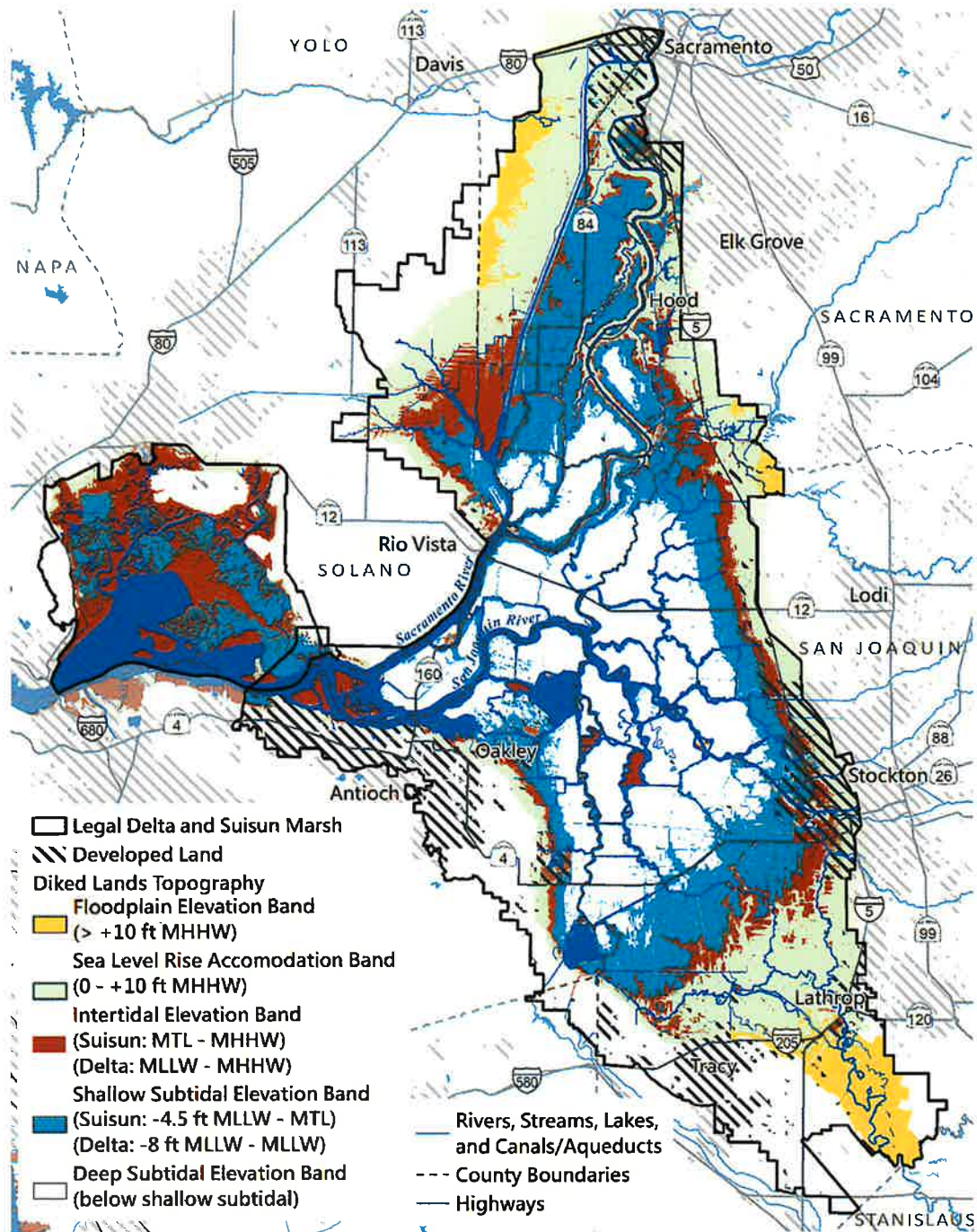


Figure 4-5. Elevation Bands for the Protection, Restoration, and Enhancement of Different Classes of Natural Communities



CALIFORNIA CENTRAL VALLEY
FLOOD CONTROL
ASSOCIATION

Executive	MELINDA TERRY
Director	
President	THOMAS SLATER
Vice President	MEEGAN NAGY
Treasurer	MICHAEL BESSETTE

February 17, 2025

Sent Via Electronic Transmittal; climatechange@deltacouncil.ca.gov

Delta Stewardship Council
ATTN: Morgan Chow
715 P Street, 15-300
Sacramento, CA 95814

Re: Comments on Delta Adapts Draft Adaptation Plan

Dear Ms. Chow:

Thank you for the opportunity to comment on the Delta Stewardship Council's Delta Adapts Draft Adaptation Plan. The California Central Valley Flood Control Association (CCVFCA) submits these comments on the proposed amendments to the Draft Adaptation Plan. CCVFCA's members are local agencies (Reclamation Districts/RDs) that perform the daily routine operation and maintenance (O&M) of levees and drainage ditches and canals; along with rehabilitation and improvement projects within their boundaries.

Clarify How the Adaptation Plan Will Be Used to Inform State Investments and Policy

Chapter 1 of the Draft Adaptation Plan states that "Delta Adapts will help prioritize future actions and investments, provide climate information for communities and agencies at all levels, and serve as a framework for future work by the Council and others" (page 1-2). We request the Council clarify how Delta Adapts will be used to inform state policy and Council actions. Particularly, additional detail should be provided on how Delta Adapts will be used to inform future Delta Plan updates.

Emphasize the Tradeoffs Between Agricultural Sustainability and Adaptation Strategies

The Draft Adaptation Plan includes many actions that would require the conversion of prime agricultural land to other land uses for ecosystem restoration or flood management. This conversion of agricultural land threatens the Delta's agricultural economy and reduces funding for levee operations and maintenance. As land is removed from agricultural production, the assessed value is reduced, thus reducing the amount of funding for local reclamation districts and levee maintenance and operations.

This tradeoff is briefly discussed in Chapter 3 of the Draft Adaptation Plan, which states: "When agricultural land is taken out of production or alternative land ownership or management is pursued, there remains the need for sustainable funding for levee improvements, as the

reduction in economic activity may no longer be sufficient to support the local cost share required to operate and maintain Delta levees” (pages 3-3 to 3-4). We request that the Council expand upon this statement to emphasize the funding gap that is created when agricultural land is converted and identify viable options to fill this gap in the Adaptation Plan. We also request that this tradeoff be mentioned or discussed in other chapters of the document where conversion of agricultural land is required to implement an action or strategy. Examples are available to illustrate how RD’s have worked with landowners on long-term valuation to support land use changes.

Identify the Need for Sustainable, Long-Term Investment in Levee Maintenance

Climate change adaptation in the Delta is not possible without a functional levee system. Therefore, we support the actions under Strategy FL-2 that identify the need to continue inspecting and maintaining our levees (FL-2-3), secure state and federal funding for levee improvements and flood resilience projects (FL-2-4), upgrade Project and Non-Project levees to withstand sea level rise (FL-2-7), and support local maintaining agencies and reclamation districts to upgrade levees (FL-2-8).

Sustainable, long-term investments in levee infrastructure is a critical component to achieving the Delta Adapts goals and implementing the Adaptation Plan strategies and actions. Reclamation districts and local maintaining agencies already are facing increasing levee maintenance costs, which includes routine maintenance as well as maintaining the function of the flood control system. These costs will continue to rise due to the impacts of climate change, rising rates and increased expenses for contract services and force account work. At the same time, state investments in levee maintenance, such as the Delta Levees Maintenance Subventions Program, are becoming less certain over the long term. The conversion of agricultural land to other land uses is then putting further constraints on local funding. Creative, multi-agency funding mechanisms are needed to support local maintaining agencies in adapting to climate change.

Although the need for state and federal investments in Delta levees is discussed throughout the Draft Adaptation Plan, the focus is on funding for multi-benefit projects. We request the Council discuss the need for investments in both multi-benefit projects and projects focused on levee maintenance and operations to ensure funding for flood control. Many levee maintenance projects may not qualify as multi-benefit under state or federal funding criteria; however, they serve a critical role in protecting the people, economy, and ecosystem of the Delta, and the State, in the face of climate change. Chapters 4 (Flood Risk Reduction Strategies) and 9 (Costs and Benefits of Adaptation) should discuss the need for funding programs focused on levee maintenance, such as the Subventions Program. Finally, action FL-2-4 should be revised to state that funding is needed for both levee improvements and maintenance.

Discuss Need to Accelerate Funding for Levee Improvements (Bulletin 192-82 and Beyond)

Chapter 9 of the Draft Adaptation Plan states that levee improvement costs identified in the Plan “do not include projected costs to bring existing levees up to Bulletin 192-82 standards and assumes that those improvements have already been made by the time climate change adaptation actions are undertaken.” However, the reality is that many Delta levees do not currently meet the Bulletin 192-82 standard. Without state and federal investments, all levees in the Delta may not

meet the standard within the Plan's planning timeframe. We request that the Council acknowledge the need for investment to accelerate efforts to get all Delta levees to the Bulletin 192-82 standard as the 'baseline' for regional climate adaptation.

The Association appreciates the opportunity to review and provide comments on Delta Adapts Draft Adaptation Plan. The point of contact for this review is Tom Engler, who can be reached at engler@mbkengineers.com or 916-456-4400.

Sincerely,

A handwritten signature in blue ink, appearing to read 'T. Engler', with a stylized flourish at the end.

Tom Engler, P.E.
Engineer
California Central Valley Flood Control Association