

Paradise Cut Bypass Expansion and Multi-Benefit Project

Advisory Committee Meeting

San Joaquin Council of Governments | 555 E Weber Ave | Stockton, California 95202

April 2, 2024
11:30 am – 1.30 pm

Special Meeting Agenda

1. Administrative Matters
 - a. Roll Call / Sign in sheet
2. Approval of Meeting Minutes and consensus on meeting notes format
 - a. Confirmation of Members and Alternates
3. Project Status and Resourcing (**Possible Action**)
 - a. Presentation on Proposals and Overall Workplan
 - b. Recommendation to SJAFCA Board to approve consultants for the Paradise Cut Bypass Expansion and Multi-Benefit Project (**Possible Action**)
4. State Updates (DWR, CVFPB)
5. Advisory Committee Comments / Items for Future Agenda
6. Public Comment
7. Adjournment

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**MINUTES
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
PARADISE CUT BYPASS EXPANSION AND MULTI-BENEFIT PROJECT
ADVISORY COMMITTEE MEETING
FEBRUARY 16, 2024**

73 W Stewart Road, Lathrop, CA

1. ROLL CALL AND MEETING OBJECTIVES 2:05 PM

Roll Call

Board Members Present:

John Herrick
Sarah Puckett
Susan Delloso
Chris Elias
Alexis Stevens
Ilene Macintire
Bob Pombo

Absent:

Nick Mussi

Non-Voting Participants and Alternates

Glenn Prasad
Dominick Gulli
Phil Balmat
William McLaughlin
Kalani Adams
Jesus Esparza
David Weisenberger
Ruth Darling
Chris Neudeck
Artie Valencia
Eric Nagy
Don Trieu
Sylvia Razniak

2. OVERVIEW OF ADVISORY COMMITTEE AND APPOINTMENT OF OFFICIALS

The 8th Board Member will need to confirm their participation in the Advisory Committee.

Appoint as Chair: John Herrick
Appoint as Vice-Chair: Sarah Puckett

Motion: Approve appointments of Chair and Vice-Chair
Moved by: Susan Delloso, Seconded by Alexis Stevens
Vote: Motion carried 5-0
Yes: John Herrick, Sarah Puckett, Susan Delloso, Chris Elias, Alexis Stevens
Absent: Ilene Macintire, Bob Pombo

This body will work with a Facilitator, who will be selected, and with the Paradise Cut Management Team. SJAFCA will serve as the lead agency on the project.

Action Minutes will be taken.

Meetings will be held the first Monday, monthly, from 12pm-2pm. The committee will be able to utilize the conference room at the River Island Reclamation District 2062 Office. Glenn Prasad will confirm availability with the members that are absent.

All Board Members to designate an alternate.

Member = Alternate
Susan Delloso = Ramon Batista
Sarah Puckett = Julia Sullivan
Alexis Stevens = Greg Pombo
Ilene Macintire = Robin Kloepfer
John Herrick = Mary Hildebrant
Chris Elias = Glenn Prasad
Bob Pombo = TBD
Nick Mussi = TBD

Ilene Macintire arrived at 2:37pm.

3. PROJECT OVERVIEW AND PROGRESS TO DATE

Mr. Prasad provided the project overview and progress to date using the attached PowerPoint slides.

4. LOOKING AHEAD

This meeting starts Phase 3 on the project milestone projection.

The Lower San Joaquin River Lathrop and Manteca Feasibility Study will be completed in 2026, with the possibility that Paradise Cut could be included in the recommended plan.

5. ROLES AND RESPONSIBILITIES OVERVIEW

The Paradise Cut Teams consist of:
Advisory Committee
Lead Agency – SJAFCA
Paradise Cut Management Team
Feasibility Study Technical Team
Technical Review Panel
An independent facilitator

Paradise Cut Management Team will be responsible for project execution and will include:
SJAFCA
SJCRC
South Delta Water Agency
DWR
American Rivers

6. CONSULTANT SELECTION PROCESS

SJAFCA will procure consultants by issuing a Request for Proposals from consultants on SJAFCA's pre-qualified consultant list for Program Management & Staff Augmentation, Plan Formulation and Environmental Planning. A Facilitator will be selected from those consultants who are SJAFCA's pre-qualified list for Program Management & Staff Augmentation. The Facilitator will go through an interview process. Ilene Macintire volunteered to review the submitted RFPs as a member of the Advisory Committee.

Motion: To authorize San Joaquin Area Flood Control Agency to proceed with the recruitment of various consulting resources to support the project, including a facilitator for the Advisory Committee.
Moved by: Sarah Puckett, Seconded by Susan Dellosso
Vote: Motion carried 6-0
Yes: John Herrick, Sarah Puckett, Susan Dellosso, Chris Elias, Alexis Stevens, Ilene Macintire
Absent: Bob Pombo

7. PROJECT SCHEDULE

Discussed that there is \$3 Million for this project specifically. Any future funding is unknown currently.

John Herrick and Glenn Prasad to send Jesus Esparza with the Department of Water Resources a list of questions regarding the potential of future funding.

8. PUBLIC COMMENT

- None

9. REVIEW ACTION ITEMS / ROUND ROBIN

10. ADJOURNMENT 3:44 PM

The meeting adjourned at 3:44 PM. The next meeting is scheduled for April 2, 2024.

In compliance with the Americans with Disabilities Act, the meeting room is wheelchair accessible and disabled parking is available. If you have a disability and need disability-related modifications or accommodations to participate in this meeting, please contact the Board's office at (209) 937-7900 or (209) 937-7115 (fax). Requests must be made one full business day before the start of the meeting.



E. SCOPE OF SERVICES & APPROACH

SECTION E | SCOPE OF SERVICES & APPROACH



The Wood Rodgers team has developed a scope and schedule that complies with the DWR funding agreement. The schedule is aggressive, and while we are committed to preparing our work products to meet this schedule, we're concerned that the schedule leaves limited time to build consensus with the advisory committee to identify a preferred alternative. Our interpretation of the scope was heavily influenced by the budget in the DWR contract. Our scope has been written to meet the requirements of the contract but is short of what we would have proposed if the budget had not been a limiting factor.

Our interpretation of the RFP is the primary goal is identifying a preferred alternative that has agency and advisory committee support. The scope has several subtasks that we agree would typically be done during the feasibility phase but are more detail than what is needed to identify a preferred alternative. This results in tradeoffs in the level of effort that are proposed for subtasks in our scope of work. Examples of elements of work that are more narrowly scoped than we would have proposed include: coordination with the advisory committee, hydraulic modeling, sediment transport modeling, the number of alternatives that can be formulated, evaluated, the and compared, the financing strategy, and the data collection and analysis to support 10% design.

Task 1 – Feasibility Consulting Services

The purpose of this task is to complete a feasibility study that provides foundational information to identify a preferred alternative that has broad stakeholder support and a framework to advance subsequent phases of the project, including but not limited to CEQA/NEPA, permitting, and detailed design. While several elements of the feasibility study have been completed—either partially or in full—the goal of this task will be to complete remaining elements of the feasibility study including development, evaluation, and selection of preferred alternatives. Based on our previous work, familiarity with site conditions, and experience developing feasibility studies, the Wood Rodgers Team knows what needs to be done to meet the feasibility study objectives and will focus our resources to complete the study within the project schedule and budget.

Task 1.1 – DWR Task 1: Project Management

1.1.1 – Quality Management Plan

In coordination with the SJAFCA Project Management Support Services consultant, Wood Rodgers will prepare a project Quality Management Plan that outlines project execution and the quality control approach for all project deliverables. The plan will identify the team members responsible for preparing each deliverable and the quality control reviewer that will provide quality control. The process for scheduling, tracking, and back-checking quality control reviews will also be outlined.

DELIVERABLES

- ▶ Draft QMP
- ▶ Final QMP will be produced

Assumptions

- ▶ The Client, with assistance from the Project Management Support Services consultant, will provide consolidated comments on the Draft QMP no later than 5 weeks after submittal of the draft.

1.1.2 Project Coordination & Meetings

Wood Rodgers understands that SJAFCA has or will have consultants that are responsible for Project Management Support, Facilitation, Outreach and Engagement with Project stakeholders. In coordination with the SJAFCA Project Management Support Services Consultant, the Wood Rodgers Team, will support the Facilitation, Outreach and Engagement Consultants, to communicate and engage with stakeholders, agency staff, and other government and regulatory agencies through a series of Advisory Committee workshops at key project milestones. The purpose of the workshops is to inform stakeholders of the process and solicit feedback during alternatives analysis, with the objective of building consensus on a preferred alternative to take into design. As part of this process, the Wood Rodgers Team will support engagement with historically interested parties, and support efforts to expand the number and diversity of interested parties, and solicit input on Project alternative formulation and Project planning through venues and procedures defined in the Engagement Strategy to be developed by the Facilitation, Outreach and Engagement Consultants.

Our team will leverage existing relationships with knowledgeable and informed stakeholders to solicit feedback during the formulation and screening of alternatives to streamline the process and help condense the schedule.

For scoping purposes, the anticipated meetings in the following sub-tasks are included, it is understood that the names of meetings and engagement types or both are dependent on the final Engagement Strategy. It should be noted that the meetings included are considered to be the minimum number required to engage and develop consensus among the complex and diverse number of stakeholders for a project of this magnitude. This approach represents an effort to meet the client's abbreviated schedule.

For each of the following Advisory Committee Workshops/ Meetings, the Wood Rodgers team will work in close coordination with the SJAFCA Project Management Support, Facilitation, Outreach and Engagement Consultants in developing content for presentation.

1.1.2.1 – ADVISORY COMMITTEE SCOPING MEETING

In the initial stages of the Project, the Wood Rodgers Team will present the project approach at an Advisory Committee Scoping Workshop. The purpose of this workshop will be to develop a broad understanding amongst all stakeholders of the Project,

the work completed to date, additional technical work to be completed, the planning process, and the Project schedule and engagement strategy.

DELIVERABLES

- ▶ Scoping meeting presentations & materials.

Assumptions

- ▶ The Facilitation, Outreach and Engagement Consultant will schedule the meeting date and venue.
- ▶ The Facilitation, Outreach and Engagement Consultant will facilitate the meeting.
- ▶ The Facilitation, Outreach and Engagement Consultant will provide detailed meeting notes to the Wood Rodgers Team, that include items discussed, key decisions made and action items.

1.1.2.2 – ADVISORY COMMITTEE GOALS AND OBJECTIVES WORKSHOP

Following the Scoping Workshop, the Wood Rodgers Team will start additional technical studies to get a complete understanding of the existing conditions and forecast of future conditions as part of the Inventory and Forecast phase of the study, which will then lead into the Problems and Opportunities phase. Once these phases are complete, a Goals and Objectives Workshop will be held with stakeholders to present the work completed to date, list the problems and opportunities identified and expand on the foundational Project goals and objectives described in the DWR work plan. The purpose of the meeting will be to:

- Solicit stakeholder feedback on the acceptability of the data presented.
- Request any additional pertinent information that stakeholders may be aware of.
- Solicit feedback and suggestions about existing and/or additional objectives to be considered in the next steps of the planning process. It is expected that much emphasis will be placed on management actions and screening criteria.

A broad understanding of these topics is critical in building an overall consensus of the goals and objectives to be achieved so that an array of potential alternatives can be evaluated thoroughly and objectively.

DELIVERABLES

- ▶ Goals and Objectives, meeting presentations, and materials.

Assumptions

- ▶ The Facilitation, Outreach and Engagement Consultant will schedule meeting date and venue.
- ▶ The Facilitation, Outreach and Engagement Consultant will facilitate the meeting.
- ▶ The Facilitation, Outreach and Engagement Consultant will provide detailed meeting notes to the Wood Rodgers Team,

that include items discussed, key decisions made and action items.

1.1.2.3 – ADVISORY COMMITTEE FINAL ARRAY OF ALTERNATIVES WORKSHOP

In close coordination with the SJAFCA Project Management Support and Facilitation, Outreach and Engagement Consultants the Wood Rodgers Team will present information at an Advisory Committee workshop to describe the development and screening of preliminary alternatives. A final array of alternatives will be presented, and feedback will be solicited. Information obtained from the stakeholders will be used to further refine the final array of alternatives before moving on to a more robust evaluation.

DELIVERABLES

- ▶ Final Array of Alternatives meeting presentations and materials.

Assumptions

- ▶ The Facilitation, Outreach and Engagement Consultant will schedule the meeting date and venue.
- ▶ The Facilitation, Outreach and Engagement Consultant will facilitate the meeting.
- ▶ The Facilitation, Outreach and Engagement Consultant will provide detailed meeting notes to the Wood Rodgers Team, that include items discussed, key decisions made and action items.

1.1.2.4 – ADVISORY COMMITTEE RECOMMENDATIONS WORKSHOP

In close coordination with the SJAFCA staff, the Project Manager and Facilitation, Outreach and Engagement Consultants, the Wood Rodgers Team will present information at an Advisory Committee workshop. The results from the technical evaluation of the final array of alternatives, and the alternative ranking rationale will be described. Finally, the recommended preferred alternative will be presented. The Wood Rodgers Team will solicit information used to refine the preferred alternative for inclusion in the Administrative Draft Feasibility Report, and Preliminary Design and Specifications deliverables. Additionally, a draft list of recommended work for future phases of the project will be presented. This list would form the basis of a longer-term Project Roadmap to be developed under optional tasks.

DELIVERABLES:

- ▶ Recommendations meeting presentations and materials.

Assumptions:

- ▶ The Facilitation, Outreach and Engagement Consultant will schedule the meeting date and venue
- ▶ The Facilitation, Outreach and Engagement Consultant will Facilitate the meeting.
- ▶ The Facilitation, Outreach and Engagement Consultant will

provide detailed meeting notes to the Wood Rodgers Team, that include items discussed, key decisions made and action items.

1.1.2.5 – ADVISORY COMMITTEE ADMINISTRATIVE DRAFT MEETING

In close coordination with the SJAFCA Project Management Support and Facilitation, Outreach and Engagement consultants the Wood Rodgers Team will present the Draft Final Feasibility Study Report at an Advisory Committee meeting. The presentation will include how feedback from regulatory agencies and other agency partners on a previously circulated Administrative Draft were incorporated into the document. The Wood Rodgers Team will solicit comments on the document for incorporation into the Final Feasibility Study Report to be presented to DWR.

DELIVERABLES:

- ▶ Administrative Draft meeting presentations and materials

Assumptions:

- ▶ The Facilitation, Outreach and Engagement Consultant will schedule the meeting date and venue .
- ▶ The Facilitation, Outreach and Engagement Consultant will Facilitate the meeting.
- ▶ The Facilitation, Outreach and Engagement Consultant will provide meeting notes to the Wood Rodgers Team.

1.1.2.6 – PARADISE CUT MANAGEMENT TEAM MEETINGS

The Wood Rodgers Team will participate in regular Monthly Meetings to communicate the status and progress of the Feasibility Study and its supporting technical studies, discuss and inform the development of alternatives, identify data needs and background documents, and schedule upcoming communication and outreach efforts. It is assumed SJAFCA's Project Management Support Consultant will facilitate this meeting, prepare agendas (with the support of the Wood Rodgers Team), and prepare meeting notes for distribution. These meetings are anticipated to be held virtually.

DELIVERABLES:

- ▶ None

Assumptions:

- ▶ Monthly Management Team Meetings.
- ▶ Program Management Team Meetings will be facilitated by SJAFCA's Project Management Support Consultant.
- ▶ Meetings will be held virtually.

1.1.2.7 – FEASIBILITY STUDY PROJECT TEAM MEETINGS

The Wood Rodgers Team will schedule and facilitate regular Feasibility Study Project Team Meetings. These meetings will

occur monthly and will entail more detailed development of feasibility study components, alternatives development, and support and baseline data sharing amongst the Wood Rodgers Team. These meetings are anticipated to be held virtually.

DELIVERABLES:

- ▶ Agenda
- ▶ Team Notes

Assumptions:

- ▶ Monthly Management Team Meetings.
- ▶ Meetings will be held virtually.

1.1.3 – Project Administration

1.1.3.1 – WORK PLAN & SCHEDULE

The Work Plan and Schedule are living documents for the duration of the Project. The initial Work Plan and Schedule will be the Project Plan included in the contract. It is anticipated that the development of the initial Work Plan and Schedule will be part of the proposal effort and that the costs for it will not be billed to the Client. The Work Plan and Schedule will be reviewed monthly for the duration of the Project. When changes to either the Work Plan or Schedule are made, the updated versions of the Work Plan and Schedule will be delivered to the Client.

DELIVERABLES:

- ▶ Draft Work Plan and updates up to 7 versions.
- ▶ Draft Schedule and updates up to 7 versions.

Assumptions:

- ▶ The client will provide comments on Drafts and updates within 5 working days of receipt.

1.1.3.2 – INVOICE & PROGRESS REPORTS

Monthly invoices will be accompanied by progress reports. Invoices will be by Task and will include the person performing the services, the hourly rate, the hours worked, and the staff classification. Each progress report will explain what work was accomplished in the prior month by Task. A brief discussion about the anticipated work in the upcoming month will also be provided. Issues associated with each task will be listed as either a new or outstanding issue. Issues that have been resolved will not be listed in the progress reports.

DELIVERABLES:

- ▶ Monthly Invoices up to 15
- ▶ Monthly progress reports up to 15

Assumptions:

- ▶ The total project duration will be 18 months.

1.1.3.3 – FILE & DOCUMENT MANAGEMENT

Wood Rodgers will assign a Project Coordinator with responsibility for electronic filing and document management.

The Project Coordinator will be responsible for organizing and logging data, documents and communications received by Wood Rodgers and other information obtained for use in the work leading to, and including, Project design. Outgoing communications will also be logged, and transmittal cover sheets will be provided as appropriate. The Project Coordinator will be responsible for routing documents as necessary to respond to comments.

DELIVERABLES:

- ▶ Data Log
- ▶ Communications Log

Assumptions:

- ▶ None

Task 1.2 – DWR Task 4: Feasibility Study

1.2.1 – Introduction

The Wood Rodgers team will provide information foundational to the feasibility study including project location, setting, background, description of related studies and reports, and a discussion of the strategy for engagement of interested parties. The intent is to provide context around the geographical location of the project; the physical and biological characteristics of the project area; the regional and historical context of the project, along with relevant authorities, policies, regulations, a discussion of past studies, and a summary findings from Phase 1 and 2; a list of stakeholders and relevant agencies, including their roles and responsibility will be compiled. The Wood Rodgers Team will also provide a summary of the engagement strategy based on the agency and project stakeholders developed by the Facilitation, Outreach and Engagement Consultant.

DELIVERABLES:

- ▶ Draft Project Setting Technical Memo.
- ▶ Draft List and Description of Relevant Authorities and Regulations.
- ▶ Draft Summary of Previous Studies.

Assumptions:

- ▶ The client will provide consolidated comments within 5 working days of receipt of the draft documents.
- ▶ The Draft Project Setting Technical Memo, Draft List and Description of Relevant Authorities and Regulations, and Draft Summary of Previous Studies are intended as draft work products to inform the Feasibility Report. Final versions of these documents will not be prepared. Revisions to the Drafts will be incorporated into the Feasibility Report.
- ▶ The client will provide the following documents listed in the DWR Work Plan:
 - Permitting strategy technical memorandum (ICF lead, with ESA support)

- Preliminary cost estimate (support)
- Existing and Needed Technical Analysis Memo (support, with focus on work needed to support permitting/CEQA/NEPA and restoration)
- Avoidance and mitigation strategy (support, with a focus on environmental)
- Long-term monitoring and maintenance (support, with a focus on environmental)

1.2.2 – Inventory & Forecast

Building on the information developed in the Introduction, the Wood Rodgers Team will advance technical studies determined to be necessary by Phase 2 analysis and describe the existing conditions and forecast the future without-project conditions. The inventory of existing conditions will consist of a general description of the project location and the project setting, including topics such as: topography, geology, soils, climate, hydrology, population, land use, communities, waterways, and environmental resources.

The future without-project conditions provide the basis for formulating alternative plans and assessing their benefits and impacts. Proper definition of these conditions will need to be coordinated with any environmental compliance documents.

DELIVERABLES:

- ▶ Draft Without-Project Conditions Technical Memo, including the summary of results from the additional technical studies.

Assumptions:

- ▶ The Client will provide the Wood Rodgers Team with copies of the following relevant project planning documents:
 - Existing Conditions Technical Memo
 - Technical Memo. Development and Calibration of Central Valley Flood Evaluation and Delineation (CVFED) September 28, 2018 Based Lower San Joaquin River HEC-RAS model.
 - Restoration Opportunities Tech Memo
 - Paradise Cut Conceptual Model Tech Memo
 - Permitting Strategy Tech Memo
 - Preliminary Cost Estimate
 - Local Engagement Strategy
 - Existing and Needed Technical Analyses Tech Memo
 - Avoidance and Mitigation Strategy
 - Long-term Monitoring and Maintenance Strategy
- ▶ The Client will provide recommendations from the strategic outreach and local engagement.
- ▶ The Client will provide consolidated comments on the Draft Without-Project Conditions Technical Memo within 10 business days of receipt.
- ▶ The Draft Without-Project Conditions Technical Memo is

intended as a draft work product to inform the Feasibility Report. A Final Without-Project Conditions Technical Memo will not be prepared. Revisions to the Draft Without-Project Conditions Technical Memo will be incorporated into the Feasibility Report.

1.2.2.1 – BASELINE SURVEYS

In addition to previously prepared studies, which our team members have authored and/or supported, additional baseline studies will be needed to support this phase of work including preliminary design. As discussed above, we looked at ways to phase or defer detailed field surveys to achieve feasibility study objectives, with a focus on advancing environmental factors that will influence design. More detailed studies to support environmental compliance and/or permitting activities may be needed, but these can occur in later phases such that the tasks necessary to advance this phase of work can be accomplished.

Based on our first-hand knowledge of the project site and our team’s authorship of the Environmental Compliance and Permitting Strategy, we recommend the following baseline studies.

Should our desktop reviews identify an area or resource that could influence design and avoidance and minimization measures (i.e., a potential fatal flaw location,) we would conduct targeted field surveys and determine what additional analysis or field surveys would be needed and during what phase of the project to support this and future phases.

1.2.2.1.1 – Wetland Delineation

An aquatic resources delineation (i.e., “wetland delineation”) within the project footprint is required to document the boundaries of potential waters of the U.S. and support project permitting, which will occur during later phases. It is also important to support feasibility study planning, but the level of certainty varies between the feasibility phase and permitting phase. For this phase, the wetland delineation should include sufficient information to support alternatives development, evaluation, and selection. The Wood Rodgers Team will perform a desktop wetland delineation to support the evaluation and selection of alternatives, development of an avoidance and mitigation strategy, development of a land acquisition strategy, and identification of mitigation needs and restoration strategies. Depending on the level of certainty of the desktop delineation, the desktop wetland delineation could potentially be used to support a USACE Preliminary Jurisdictional Determination (PJD). We will identify additional wetland delineation needs to support project permitting, such as field verification, which would occur post the feasibility study phase.

DELIVERABLES:

- ▶ Draft Wetland Delineation Technical Memo

Assumptions:

- ▶ The client will provide consolidated comments within 5 working days of receipt of the Draft Wetland Delineation Technical Memo.
- ▶ The Draft Wetland Delineation Technical Memo is intended as a draft work product to inform the Feasibility Report. A Final Without-Project Conditions Technical Memo will not be prepared. Revisions to the Draft Without-Project Conditions Technical Memo will be incorporated into the Feasibility Report.

1.2.2.1.2 – Biological Resources

We recommend conducting a desktop review of biological resources sufficient to support alternatives development, evaluation, and selection. It will also be used to support the development of an avoidance and mitigation strategy, development of a land acquisition strategy, and identification of mitigation needs and restoration strategies. The study would provide the basis for the CEQA/NEPA analysis regarding biological resources as well as the initial steps for regulatory permits/authorizations, with the potential for the presence of special-status species and habitats being determined. We will identify additional wetland delineation needs to support project permitting, such as field verification, which would occur post the feasibility study phase.

DELIVERABLES:

- ▶ Biological Resources Technical Memo.

Assumptions:

- ▶ The client will provide consolidated comments within 5 working days of receipt of the Biological Resources Technical Memo.
- ▶ The Draft Biological Resources Technical Memo is intended as a draft work product to inform the Feasibility Report. A Final Without-Project Conditions Technical Memo will not be prepared. Revisions to the Draft Without-Project Conditions Technical Memo will be incorporated into the Feasibility Report.

1.2.2.1.3 – Cultural Resources

Conduct a records search for the Area of Potential Effect (APE) to identify known cultural resources and to assist in the development of a historic context. The records search would include previous cultural resources inventories and previously recorded cultural resources through the appropriate regional Information Centers of the California Historic Resources Information System (CHRIS). This will help inform alternatives development, evaluation, and selection. It will also be used to support the development of an avoidance and mitigation strategy, development of a land acquisition strategy, and identification of mitigation needs and strategies. Based on what is needed during this phase of the project to move forward, we recommend more detailed surveys be conducted during the environmental compliance and permitting phase. This would

include activities such as conducting a pedestrian survey to identify cultural resources within the APE. While a Cultural Resources Study Report to support compliance with Section 106 of the National Historic Preservation Act (NHPA) is not required during this phase, we will summarize findings following the study report format to help streamline the preparation of this report in a future phase.

DELIVERABLES:

- ▶ Cultural Resources Technical Memo.

Assumptions:

- ▶ The client will provide consolidated comments within 5 working days of receipt of the Cultural Resources Technical Memo.
- ▶ The Draft Cultural Resources Technical Memo is intended as a draft work product to inform the Feasibility Report. A Final Without-Project Conditions Technical Memo will not be prepared. Revisions to the Draft Without-Project Conditions Technical Memo will be incorporated into the Feasibility Report.

1.2.2.1.4 – Conceptual Geotechnical Evaluation

Areas of geotechnical uncertainty for the Project involve new levee investigation and design, sources of borrow material for levee construction, potential impacts of channel restoration activities on adjacent levees and bank slopes, ability of levees to support equipment, if necessary, for channel restoration operations, and suitability of dredged materials for use in levee construction, seepage berms, and/or disposal. Test results of sediment within the Project vicinity show a wide range of grain size. The suitability of dredged materials for new levee construction could be limited. However, materials may be suitable for raising adjacent grades.

For this feasibility phase of the project, geotechnical assessments to support evaluation of conceptual design alternatives to support the selection of a preferred alternative will be based on information readily available from SJAFCA and local Reclamation Districts that own and maintain levees in the area. No subsurface field investigations and surveys are proposed.

Wood Rodgers will coordinate with SJAFCA and reach out to local Reclamation Districts for available geotechnical information. This information will be reviewed, categorized, and collated to support feasibility study assessments. The collated information will also be used to identify data gaps as they relate to the preferred alternative. A detailed breakdown of information and geotechnical analysis needed to support detailed design during subsequent phases of work will be prepared, along with an estimate of the level of effort needed to complete these tasks.

DELIVERABLES:

- ▶ Draft Geotechnical Data Memo.
- ▶ Draft Geotechnical Recommendations Memo.

1.2.2.2 – SEDIMENT TRANSPORT MODEL

Accumulation of sediment in Paradise Cut and other channels within the South Delta has adversely affected water quality, irrigation diversions, and flood conveyance capacity. Sedimentation in this part of the Delta is a complex phenomenon resulting from several factors including tidal hydrodynamics and delivery of fluvial sediment by the San Joaquin River, particularly during periodic high flow conditions. To date, no detailed sediment transport modeling has been performed to investigate the sediment dynamics at the existing Paradise Cut weir, or to determine how modification of the weir or other flood control facilities might affect sediment dynamics in the South Delta.

The existing Paradise Cut weir only overtops on average once every five to ten years. It is during these periods when sediment dynamics in the South Delta are most influenced by the influx of fresh water and fine sediment from the San Joaquin River, and the influence of tidal hydrodynamics on sediment transport is less pronounced. Understanding this, the analysis will be limited to analysis of the effects on fluvial sediment dynamics that would result from proposed modification of the Paradise Cut weir.

The project will require analysis of existing conditions (i.e., “no action alternative”) and up to three additional alternatives representing physical changes to the flood control system. For efficiency, the Wood Rodgers Team will adapt a calibrated HEC-RAS hydraulic model to support this analysis. The HEC-RAS sediment transport module will be parameterized using existing data and studies, including the long-term bed and suspended sediment data recorded at the USGS station at Vernalis. The existing conditions model will be validated using volumetric change analysis of historic bathymetry datasets within the San Joaquin River, Paradise Cut, and/or the South Delta maintained by DWR and others, relative performance of the respective alternatives will be assessed by comparison of simulated volumetric bed change at key locations (index points) and by reach. We also plan for one day of field reconnaissance for the Wood Rodgers Team to review and document geomorphic and hydraulic conditions prior to initiation of the modeling analysis.

The Wood Rodgers Team will also summarize information on likely future scenarios concerning changes in hydrology, sea level, and sediment accumulation within the system at and downstream of the Project. We will recommend any additional sensitivity testing/models runs as appropriate. We will model potential changes in future channel flow, and associated sediment flux, and sea level to assess whether changes in these dynamics may affect considerations related to flood operations and maintenance.

SUBTASK OUTLINE:

- 1. Compile and Review Existing Data
- 2. Develop Hydrologic Boundary Conditions (stage and flow)

- 3. Parameterize Sediment Transport Model, Calibrate and Validate
- 4. Alternatives Analysis – Contemporary Hydrology
- 5. Alternatives Analysis – Future Climate Conditions Hydrology
- 6. Technical Report
- 7. Meetings and Coordination

DELIVERABLES:

- ▶ Draft and Final Technical Report detailing the findings of the analysis, including comparative analysis of volumetric bed changes in key downstream reaches affected by the Project will be delivered in electronic (PDF) format.
- ▶ Digital files of all HEC-RAS sediment transport modeling will be made available by request.
- ▶ Presentations, meeting notes, and other materials developed for the project will be made available electronically on request.

Assumptions:

- ▶ HEC-RAS hydraulic modeling prepared for project alternatives may require minor modifications for stability during sediment transport analysis.
- ▶ For the sediment model validation exercise and any long-term model simulations, the hydraulic boundary conditions can generally be parameterized directly, or readily scaled, from available data.
- ▶ For consistency with the flood hydraulic analyses, stage- and flow-frequency relationships, future climate conditions, and event-based hydrology simulations will be based on data prepared for the project.
- ▶ USGS sediment rating curve data (gradation vs. load) is assumed to be available for use to parameterize the model. If not, the Wood Rodgers Team will develop a rating curve using data from the gage using the HEC-RAS Sediment Rating Curve Analysis Tool.
- ▶ Conditions downstream of Vernalis are assumed to be primarily depositional.

1.2.2.3 – WATER QUALITY PROBLEMS & OPPORTUNITY ANALYSIS

The Wood Rodgers Team will review the Project planning documents completed to date and will develop the dredge template (depths and extents) for others on the team to model. Hydrodynamic modeling performed by others will inform how restoration of the historical channel depths will influence net flows, water quality, fish migration, and conditions during floods. This evaluation will include identification of potential ecological benefits of alternatives that modify the channels plan form through dredging. The Wood Rodgers Team will provide input on temporary construction water quality impacts.

DELIVERABLES:

- ▶ Text for inclusion in the feasibility study on water quality problems and opportunities.

Assumptions:

- ▶ This evaluation will not include modeling and will be based on qualitative assessment of the effects of the alternatives.

1.2.2.3.1 – Incorporate Delta Dredging FS Results and Recommendations

Anchor QEA prepared the Planning Guide for the Channel Depth Restoration Program for the South Delta Channels (2021) (Planning Guide) for the Delta Channel Maintenance Group under a contract administered by the State Water Contractors. The Planning Guide focused on eight of the South Delta channels, many that may be considered for dredging in the alternatives for this Project. The Planning Guide outlines the framework for developing dredging projects to address sedimentation that has been impacting channel conveyance and water quality. The Wood Rodgers Team will incorporate and revise as necessary with updated information relevant results and recommendations of the Planning Guide for use in this Feasibility Study. The Wood Rodgers Team will utilize and expand upon (as needed) the conceptual dredging templates developed in the Planning Guide. Not all of the channels to be considered for this Project were evaluated in the Planning Guide, but a similar high-level conceptual design approach will be utilized for those channels not yet evaluated.

DELIVERABLES:

- ▶ Text for inclusion in the feasibility study.

1.2.2.4 – BASELINE HYDROLOGY & HYDRAULICS

The Wood Rodgers Team will update the existing Paradise HEC-RAS model to a feasibility level and incorporate input from the TRP to evaluate the without project conditions. Analysis for a 10-year, 100-year, 200-year, and one climate change scenario will be performed. This model will be the basis for hydraulic performance evaluation of the final array of alternatives.

DELIVERABLES:

- ▶ Calibrated Paradise Cut HEC-RAS Model.
- ▶ Draft Paradise Cut Baseline Hydrology and Hydraulics Technical Memo.

Assumptions:

- ▶ The Client will provide the TRP recommendations on adequacy of the existing Paradise Cut HEC-RAS model.
- ▶ The budget for this task assumes moderate input from the TRP.
- ▶ The Client will provide TRP comments on the Draft Paradise Cut Baseline Hydrology and Hydraulics Technical Memo.

- ▶ The Draft Paradise Cut Baseline Hydrology and Hydraulics Technical Memo will remain in Draft form and form the Basis for a Final Paradise Cut Hydraulics Technical Memo (comments on the draft report will be incorporated in the Final).

1.2.3 – Problems & Opportunities

The Wood Rodgers Team will document problems and opportunities in the project area. The problems and opportunities will be used to guide the project's design development and inform the description of the project need for environmental compliance purposes. Therefore, proper identification of problems and opportunities is foundational to the planning process.

The Wood Rodgers Team will consider resources such as hydraulics, hydrology, climate, floodplains, geotechnical concerns, levee integrity, economics, hazards, and maintenance issues. Examples of problems include aging infrastructure, inadequate conveyance capacity and storage, physical constraints, climate change, or degradation of riverine habitat and ecosystem functions. Opportunities may include new funding streams or authorities, willing sellers for right-of-way, new management techniques or technologies, or other strategies.

DELIVERABLES:

- ▶ Draft List of Problems and Opportunities.

Assumptions:

- ▶ The Client will provide the Wood Rodgers Team with copies of the following relevant project planning documents:
 - Avoidance and Mitigation Strategy.
 - Land and Conservation Easement Acquisition Strategy.
 - Lower San Joaquin Regional Mitigation Needs and Restoration Assessment.
- ▶ The Client will provide timely copies of outreach and engagement summaries, notes, and recommendations.
- ▶ The Client will provide consolidated comments on the Draft List of Problems and Opportunities within 5 business days of receipt.
- ▶ The Draft List of Problems and Opportunities is intended as a draft work product to inform the Feasibility Report. A Final List of Problems and Opportunities will not be prepared. Revisions to the Draft List of Problems and Opportunities will be documented in the Feasibility Study.

1.2.3.1 – AVOIDANCE & MITIGATION STRATEGY

Anchor QEA's dredging permitting and compliance efforts will be led by Katie Chamberlin, who facilitated the San Francisco Bay Long-Term Management Strategy (LTMS) program for dredging and dredged sediment management and contributed to the Delta LTMS program. Katie works closely with Delta-based dredging

project proponents, including the Port of Stockton, Reclamation District 2108, the City of Stockton, East Contra Costa Irrigation District, Department of Water Resources, and the State Water Contractors. For this project, Katie will participate in project and stakeholder scoping and planning discussions to provide relevant regulatory and environmental compliance-related planning considerations for the dredging and sediment management components of the project. She will support Megan as she develops the dredge design and dredge material placement or reuse concepts and engage other Anchor QEA staff to provide as-needed insight on regulatory issues related to sediment characterization, beneficial reuse, Endangered Species Act compliance, and habitat restoration.

Specifically, Katie will review the dredging design alternatives to assess the compliance considerations related to the following agencies and regulations:

- National Environmental Policy Act.
- California Environmental Quality Act.
- U.S. Army Corps of Engineers: Clean Water Act, Section 404 and 408, and Rivers and Harbors Act, Section 10, permitting considerations.
- U.S. Fish and Wildlife Service: Endangered Species Act, Section 7, considerations
- National Marine Fisheries Service: Endangered Species Act, Section 7, considerations.
- Central Valley Regional Water Quality Control Board Clean Water Act, Sections 401 and 402, and Porter-Cologne Water Quality Control Act, permitting considerations.
- California Department of Fish and Wildlife California Fish and Game Code, Section 1600, and California Endangered Species Act, permitting considerations.
- Central Valley Flood Protection Board approval considerations.
- California State Lands Commission land lease considerations.

Working for SJAFCA’s marine contractor, Shimmick, Katie led efforts to characterize sediment and obtained approval from the Port of Stockton and the Central Valley Regional Water Quality Control Board to place sediment dredged as part of the Smith Canal Gate Structure project at the Port’s dredged material placement site. Working in collaboration with dozens of stakeholders, Katie also led the regulatory sections of the State Water Contractor’s Planning Guide for the South Delta Channels Depth Restoration. She also oversaw development of a dredge operations plan and processes for obtaining programmatic permits for maintenance dredging of the Port of Stockton’s docks.

DELIVERABLES:

- ▶ Text for inclusion in the draft Feasibility Study relative to dredging permitting and authorizations.

1.2.3.2 – LAND CONSERVATION AND EASEMENT ACQUISITION STRATEGY

The Wood Rodgers Team will build on existing information to complete a strategy to acquire flood and conservation easements for all affected land within the Project footprint. The Wood Rodgers Team will identify and describe challenges and opportunities for acquisition (i.e., fee titles, easements, endowments, etc). We will also assess the needs for eminent domain action, authority, and commitments. Existing information will be used to complete a Long-term Land Management Strategy.

DELIVERABLES:

- ▶ Land Conservation Easement Strategy Acquisition Strategy.
- ▶ Long-term Land Management Strategy.

1.2.3.3 – LOWER SAN JOAQUIN REGIONAL MITIGATION NEEDS & RESTORATION ASSESSMENT

The Wood Rodgers Team will build on existing work completed by SJAFCA and River Partners and develop a proactive strategy to estimate mitigation needs and comprehensively integrate the project with regional mitigation needs and projects. This previous work will guide the team in identifying opportunities to integrate mitigation needs of both the this project but potentially multiple ongoing or future projects in the region. In addition to identifying regional mitigation opportunities, recommendations to update existing work with findings from the feasibility study may be included.

DELIVERABLES:

- ▶ Lower San Joaquin Regional Mitigation Strategy.

1.2.4 – Goals & Objectives

The Wood Rodgers Team will work with SJAFCA to establish and confirm goals and objectives to address the identified problems and capitalize on the opportunities to maximize multi-benefits. The goals and objectives will also inform the formulation and evaluation of alternatives. Previous planning efforts have defined the primary goal of the proposed Project to increase the flow in the Bypass to reduce stage along the San Joaquin River, while achieving other benefits, such as ecosystem restoration.

The Wood Rodgers Team will also consider any constraints that may limit the planning process. Some general types of constraints that need to be considered are resource constraints and legal and policy constraints. Constraints identified in previous planning efforts include:

- Reinforcement or hardening of the Duel Levees.
- Confirm that a levee is not needed south of the Duel levee (some homes may need to be evaluated)
- Rail trestle design.
- Revisit the conclusion that existing bridge openings do not need to be expanded or reinforced.
- Design the weir.
- Design retrofit of pumps that currently drain the expansion area that are also critical for draining Duel.
- Potential repurposing of RD 2095 levee on the San Joaquin and associate opportunities and constraints.
- Hydraulics of overflow weir dynamics.

DELIVERABLES:

- ▶ Draft List of Goals for the Study Area.
- ▶ Draft List of Objectives for the Study Area.
- ▶ Draft List of Constraints for the Study Area.

Assumptions:

- ▶ The Client will provide consolidated comments on the Draft List of Goals, Objectives, and Constraints within 10 business days of receipt.
- ▶ The Draft List of Goals, Objectives, and Constraints is intended as a draft work product to inform the Feasibility Report. A Final List of Goals, Objectives, and Constraints will not be prepared. Revisions to the Draft List of Goals, Objectives, and Constraints will be documented in the Feasibility Report.

1.2.4.1 – IDENTIFY MANAGEMENT ACTIONS

A management action is a feature or individual action that can serve as a building block to alternatives that meet the goals and objectives of a proposed Project.

The Wood Rodgers Team will review past technical work in the project area to develop a preliminary list of possible management actions. The Wood Rodgers Team will supplement the preliminary list of management actions with information gathered through the outreach and engagement process. The Wood Rodgers Team, in coordination with the Client, will vet, screen, and supplement the list of possible management actions.

DELIVERABLES:

- ▶ Draft list of possible management actions that may be used to form alternatives.

Assumptions:

- ▶ The Client will provide the Wood Rodgers Team with copies of the following relevant project planning documents:
 - What documents would be revised for potential management actions? Can replicate the list in other assumptions sections, but if there are other documents,

those should be specified.

- ▶ The Client will provide timely copies of outreach and engagement summaries, notes, and recommendations.
- ▶ The Client will attend at least one and no more than two meetings with the Wood Rodgers Team to provide input on the preliminary list of possible management actions.
- ▶ The schedule assumes the Client will provide consolidated comments on the Draft list of possible management actions within 5 business days of receipt.
- ▶ The draft list of possible management actions is intended as a draft work product to inform the Feasibility Report. A final list of possible management actions will not be prepared. Revisions to the draft list of possible management actions will be documented in the Feasibility Study.

1.2.5 – Foundation of Preliminary Alternatives

The Wood Rodgers Team will aggregate management actions into an initial array of alternatives to meet planning goals and objectives, avoid constraints, and incorporate opportunities. To do this, the Wood Rodgers Team will formulate up to eight alternatives, including the no action alternative.

DELIVERABLES:

- ▶ Draft conceptual figure/map of initial array of alternatives.
- ▶ Draft description of the preliminary alternatives.

1.2.5.1 – PRELIMINARY ALTERNATIVE SCREENING

The Wood Rodgers Team will use qualitative screening to reduce the eight preliminary alternative. The qualitative screening criteria will include potential to meet goals and objectives, relative cost, acceptability, and preliminary feasibility (complexity, potential impacts, etc.). The Wood Rodgers Team will consult with the client and previously developed information to inform the screening.

DELIVERABLES:

- ▶ Draft Technical Memorandum to document the formulation and screening of the preliminary alternatives.

Assumptions:

- ▶ There will be up to four alternatives in the final array, including the no action alternative.
- ▶ Revisions to the formulation and screening TM will be incorporated into the Feasibility Report.

1.2.6 – Evaluation & Comparison of Final Array of Alternatives

The Wood Rodgers Team will develop feasibility-level cost estimates for all construction, real estate requirements, operations and maintenance, and environmental mitigation costs. As the alternatives are evaluated, consideration will be given to the potential construction impacts and risks,

environmental constraints and other permitting requirements. The Wood Rodgers Team will perform various technical analyses to evaluate each of the final four alternatives including hydraulic performance, cost efficiency, and ability to achieve multi-benefits. The alternatives will be ranked and recommended in consideration of the costs and benefits.

DELIVERABLES:

- ▶ Draft evaluation and comparison of the final alternatives, including:
 - Feasibility-level cost estimates
 - Hydraulic performance
 - Multi-benefits
 - Environmental constraints and permitting requirements

Assumptions:

- ▶ Revisions to the evaluation and comparison of the final alternatives will be incorporated in the Feasibility Report.

1.2.6.1 – RANK ALTERNATIVES

Based on our evaluation, the Wood Rodgers team will select the most reasonable, balanced, and cost-efficient alternative that best achieves multiple benefits, meets project objectives with reasonable cost, and to the extent possible, represents the interests of all parties. To do so, we will conduct a tradeoff analysis, whereas we will focus on the most important performance objectives first and then add in considerations of other objectives. This tradeoff analysis is important for multi-benefit projects and should consider public safety, economics, and environmental benefits. A tradeoff scoring rationale and methodology will be developed and described to support the selection of the preferred alternative.

DELIVERABLES:

- ▶ Draft Tradeoff Analysis Technical Memo

Assumptions:

- ▶ The client will provide consolidated comments on the Draft Tradeoff Analysis Technical Memo with 10 working days of receipts.
- ▶ The Draft Tradeoff Analysis Technical Memo is intended to inform the feasibility study. The Draft Tradeoff Analysis Technical Memo will remain draft, and comments will be incorporated to the final feasibility study.

1.2.6.2 – DEVELOP CONCEPTUAL DESIGNS

The Wood Rodgers Team will utilize order of magnitude assessment of earthwork volumes, major infrastructure (roads, bridges, utilities, etc.) modifications or relocations, land acquisition requirements, and habitat improvement and environmental restoration extents to differentiate the final array of alternatives. Conceptual levee and dredging templates will be developed using basic design components including target

dredge and top of levee elevations, channel width, and channel and levee side slopes. Anchor QEA prepared the Planning Guide for the Channel Depth Restoration Program for the South Delta Channels (2021) (Planning Guide) for the Delta Channel Maintenance Group under a contract administered by the State Water Contractors. The Planning Guide focused on eight of the South Delta channels, many that may be considered for dredging in the alternatives for this Project. The Planning Guide outlines the framework for developing dredging projects to address sedimentation that has been impacting channel conveyance and water quality. The Wood Rodgers team will utilize the order-of-magnitude assessment of dredging volumes and site capacity needs from the Planning Guide, adding those channel reaches not previously considered. We will provide schematic cross sections and plan views of Paradise Cut and the dredged downstream channel extents showing of three action alternatives. We will provide preliminary earth work and dredge volume estimates for the three action alternatives.

DELIVERABLES:

- ▶ Schematic cross sections for 3 action alternatives.
- ▶ Conceptual Plan Views for 3 action alternatives.
- ▶ Estimates of Conceptual Infrastructure Modifications or Relocations, Earth Work Volumes, Habitat Units, and Acquisition Acreages.

Assumptions:

- ▶ Alternatives will all be at a similar level of design (0-2%)

1.2.6.3 – DEVELOP CONCEPTUAL COSTS

The Wood Rodgers team will provide order of magnitude (Class 5) cost estimates for the final array of alternatives for the purposes of comparison and evaluation. Costs will be developed based on quantities determined from conceptual designs using AutoCAD Civil 3D. Unit prices for cost estimates will use information from contractor bid tabulations from similar projects in the California Central Valley. For cost items not contained in bid tabulations, industry publications such as R.S. Means Heavy Construction Cost Data or Caltrans Cost Information will be used.

DELIVERABLES:

- ▶ Class 5 Cost estimates for three alternatives (no estimate for without project alternative).
- ▶ Draft Final Array of Alternative Cost Technical Memo.

Assumptions:

- ▶ Alternatives will all be at a similar level of design (0-2%)

1.2.6.4 – EVALUATE HYDRAULIC PERFORMANCE OF ALTERNATIVES

Using the updated Paradise Cut HEC-RAS model, the Wood Rodgers Team will add the final array of alternatives and compare hydraulic performance of each to the without project condition. Analysis for a 10-year, 100-year, 200-year, and one climate

change scenario will be performed for each alternative.

DELIVERABLES:

- ▶ Calibrated Final Paradise Cut HEC-RAS Model.
- ▶ Draft Paradise Cut Hydrology and Hydraulics Technical Memo.
- ▶ Final Paradise Cut Hydrology and Hydraulics Technical Memo.

Assumptions:

- ▶ The Client will provide the TRP comments on the Draft Paradise Hydrology and Hydraulics Technical Memo within 5 working days of receipt.

1.2.6.5 – DEVELOP PROJECT FINANCING STRATEGY

Local, State and Federal funding sources will be identified for evaluation and comparison of alternatives. The financing strategy will include the potential to combine programs and identify an approach to financing implementation if elements are proposed to be implemented by a local agency. Alternatives, or elements of an alternative that are implemented by the State or Federal governments will be assumed to be implemented based on annual appropriations.

DELIVERABLES:

- ▶ Draft Financing Strategy Technical Memo.

Assumptions:

- ▶ The Client will provide consolidated comments within 5 working days of receipt
- ▶ The Draft Financing Strategy Technical Memo is intended as a draft work product to inform the Feasibility Report. A Final Financing Strategy Technical Memo will not be prepared. Revisions to Draft Financing Strategy Technical Memo will be documented in the Feasibility Study and Financial Plan.

1.2.7 – Recommendation & Implementation

The Wood Rodgers Team will use information developed in previous tasks, to outline the process for implementing the recommended alternative. This will include a summary discussion of funding streams and financial strategies, environmental compliance (CEQA/NEPA) and permitting, mitigation and monitoring requirements, engineering and design required for both environmental compliance and construction, and potential construction phasing considerations. This information would be the basis for the optional task 2.1 Project Road Map Development and Refinement.

DELIVERABLES:

- ▶ Draft Recommendation and Implementation Technical Memo

Assumptions:

- ▶ The client will provide consolidated comments within 5 working days of receipt of the draft documents.
- ▶ The Draft Recommendation and Implementation Technical

Memo is intended as a draft product to inform the feasibility study and future optional tasks. A final draft will not be prepared. Comments and revisions to Draft Recommendation and Implementation Technical Memo will be incorporated in the feasibility study and future optional deliverables.

1.2.8 – Project Financial Plan

The recommended alternative will include a funding plan identifying the array of local funding sources and state and federal programs that could be pursued to fund implementation. It's likely that the preferred alternative will require a variety of funding sources to implement. The project costs will need to be broken up into implementable increments and escalated to the anticipated year(s) that each increment would be implemented. Implementation increments are anticipated to include design, permitting, NEPA and CEQA, land acquisition, multiple construction contracts and OMRR&R. For the local funding portion of the capital improvement program, a finance plan and cash flow model will need to be developed to bond against the local revenue stream(s). Funding options for OMRR&R will also be included in the financial plan.

DELIVERABLES:

- ▶ Draft Financial Plan
- ▶ Final Financial Plan

Assumptions:

- ▶ The Client will provide consolidated comments within 5 working days of receipt.

1.2.9 – Prepare Feasibility Report

Using the information developed in Task 3.1.2, the Wood Rodgers Team will assemble the Feasibility Report, following the guidance from DWR's Feasibility Study Framework. The Report will document the steps in the plan formulation process including identifying problems and opportunities, inventorying existing and forecasted conditions, alternative formulation, alternative evaluation, and selection of a preferred alternative.

DELIVERABLES:

- ▶ Administrative Draft Feasibility Report.
- ▶ Final Draft Feasibility Report, which incorporates comments from the client.
- ▶ Final Feasibility Report, which incorporates comments from DWR and interested parties.

Task 1.3 – DWR Task 5: Preliminary Engineering & Landscape Design

1.3.1 – Preliminary Design & Cost Estimates

1.3.1.1 – PRELIMINARY LANDSCAPE-SCALE MULTI-BENEFIT RESTORATION PLAN (10%)

In addition to expanding the region's flood conveyance capacity, the Paradise Cut project is being planned as a multi-benefit

project that would restore wetland and riparian habitats for native fish and wildlife, including listed and endangered species such as riparian brush rabbit and giant garter snake. The Paradise Cut corridor also has the potential to generate large quantities of restored shaded riverine aquatic (SRA) habitat, which is currently in high demand as a crediting source for compensatory mitigation throughout the region.

Once a preferred alternative has been identified through the Feasibility Study screening process, the Wood Rodgers Team will work to develop restoration goals and objectives for the Project. While we anticipate that restoration goals and objectives for Paradise Cut will be similar to those developed for the Mossdale Tract Area UFRR Project, we recognize that restoration opportunities and constraints will be unique to Paradise Cut and will seek to identify these early with input from the broader project team before initiating conceptual design.

For efficiency, work previously developed to characterize the linkages between topographic elevation and hydroperiod for the neighboring Mossdale Tract Area UFRR Project will be reviewed, and where applicable leveraged, to develop preliminary restoration design criteria for the Paradise Cut corridor. We also plan for up to two days of field reconnaissance to review and document existing conditions within the Project footprint prior to initiation of the modeling analysis. We anticipate that this effort will involve a combination of mapping of select representative areas of existing vegetation against elevation and use of the HEC-EFM (or similar) to analyze relevant hydroperiod statistics within Paradise Cut. Restoration design criteria would be reviewed with the project team, as well as SJAFCA and DWR prior to initiating the conceptual habitat design task.

ESA will use the project restoration design criteria, in conjunction with available data (provided by others), to develop a landscape-scale restoration concept within the proposed project footprint. A preliminary analysis of an ecologically relevant range of stage-discharge relationships will be conducted to confirm the efficacy of the proposed restoration actions at key locations within the project footprint. Given the limited budget and schedule, we anticipate that the conceptual restoration design package will include a series of exhibits depicting the following:

- Existing Topography
- Soils
- Existing Land Cover/Habitat
- Proposed Land Cover/Habitat
- Proposed Restoration Plan (habitat types and features, vegetation zones, etc.)
- Typical Enhancement Details

A concept-level estimate of quantities related to restoration activities (e.g., earthwork, planting, etc.) will be developed.

Work would be organized and managed by the following

subtasks:

SUBTASK OUTLINE:

- 1. Compile and Review Existing Data
- 2. Restoration Goals and Objectives
- 3. Restoration Opportunities and Constraints Analysis
- 4. Restoration Design Criteria
- 5. Restoration Hydrologic and Hydraulic Analysis
- 6. Conceptual Restoration Design Plans (10%-level)
- 7. Opinion of Probable Cost (10%-level)
- 8. Basis of Design Report (10%-level)
- 9. Meetings and Coordination

DELIVERABLES:

- ▶ The Wood Rodgers Team will present restoration goals and objectives, opportunities and constraints, and design criteria, and initial design concepts to SJAFCA and the project team during regularly scheduled web-based video conference meetings. Comments on these components will be documented and addressed during preparation of the Draft 10% Basis of Design Report.
- ▶ Draft and Final 10% Basis of Design Report delivered in electronic (PDF) format. The document will provide a concise description of the process used to develop the conceptual restoration design and present preliminary quantities estimates and opinion of probable cost. This document will be adapted and refined as the design process progresses.
- ▶ 10% design plans, typical cross sections and details delivered in electronic (PDF and GIS) format.
- ▶ Digital files associated with habitat modeling and design (e.g. CAD, GIS, etc.) will be made available by request.
- ▶ Presentations, meeting notes, and other materials developed for the project will be made available electronically on request.

Assumptions:

- ▶ HEC-RAS hydraulic modeling prepared by MBK for project alternatives may require minor modifications to support ecohydraulic analysis for input into HEC-EFM (or similar).
- ▶ Project planning and conceptual restoration design will rely largely on existing publicly available soil, vegetation, and topographic mapping sources (i.e. NRCS, CDFW, DWR, etc.). Limits of conceptual restoration elements will be driven by flood management priorities including levee setbacks, existing infrastructure and other information provided by Wood Rodgers.
- ▶ ESA assumes that any basis of design report (BODR) documentation will be developed at a conceptual level of detail and will be amended through subsequent phases of design.

- ▶ DWR comments on Draft Preliminary Design and Cost Estimates will be collated and provided in a single spreadsheet document. For budgeting and schedule purposes, one round of comments with SJAFCA and DWR is assumed.
- ▶ Assumes up to ten (10) design sheets will be developed.

1.3.1.2 – PRELIMINARY CIVIL DESIGN (10%)

Wood Rodgers will prepare civil design plans for the preferred alternative to a completion level of 10%. The plans will include a title page, table of contents, standard notes and abbreviations, vicinity map, area map, survey control and general notes, and an overall site plan. The preferred alternative will be presented in plan view with typical cross sections, alignment layout sheets, details, plan and profiles, and other drawings necessary to capture the overall project features and components. The plans will be prepared using AutoCAD Civil 3D. Base mapping will be existing LiDAR topographic mapping to be provided by SJAFCA. Available mapping includes USGS 3DEP Mapping (collected in 2017 and 2018).

After selection of the preferred alternative, Anchor QEA will lead finalization of the preliminary dredge design.

Historical bathymetric data provided by DWR South Delta Branch during development of the Planning Guide will be utilized for this project, including NOAA 1934 soundings (assumed to have been collected by the plumb bob method) and a 2018 Digital Elevation Model (DEM) of a compilation of the bathymetric data collected between 2011 and 2018 of the Delta. Available bathymetric data will be compared to the channels under consideration for dredging, to identify data gaps. Additional multibeam or manual bathymetric survey data, to be collected by others, will provide more up-to-date information and allow for sedimentation rate estimates.

In 2021, the South Delta Water Agency performed investigative sediment sampling and testing along Old River and Middle River to determine general sediment characteristics to inform future decisions (Anchor QEA 2021). The results showed variation in grain sizes between predominately sand to predominately fines, and that the sampled sediment was relatively free of contaminants with some minor exceedances indicating additional chemical testing may be required. Anchor QEA will utilize the information to inform conceptual design and placement of the dredged material, including possible uses of the material for levee improvements; however additional sediment sampling and analyses will be required for agency approval and evaluation of dewatering and beneficial use design.

While developing the conceptual design, Anchor QEA will consider the existing levees and the standards they were originally built to, as some channel levees are designed to meet USACE standards while others were built to an agricultural standard.

DELIVERABLES:

- ▶ Preliminary (10%) Construction Drawings.

Assumptions:

- ▶ Drawings to be prepared in AutoCAD Civil 3D Format.

1.2.1.3 – PRELIMINARY COST ESTIMATE (10%)

The Wood Rodgers Team will prepare a 10% construction cost estimate. The estimate will be prepared based upon construction quantities developed from the 10% design drawings and generated from AutoCAD Civil 3D tools. Unit prices will be developed using construction bid tabulations from other similar flood control and habitat enhancement projects in the California Sacramento and San-Joaquin Delta. The cost estimate will be presented in Microsoft Excel format. A construction contingency of 30% will be applied to the cost estimate.

The Wood Rodgers team will also develop an opinion of probable cost for the preferred alternative dredge work including equipment mobilization/demobilization, dredging via hydraulic or mechanical excavation, dewatering (if required), containment berm construction and layout (if required), material working and hauling (if required), and placement for levee improvement or offsite disposal.

DELIVERABLES:

- ▶ Preliminary (10%) Construction Cost Estimate.

Assumptions:

- ▶ Cost Estimate to be prepared in Microsoft Excel Format.

Task 2 – Feasibility Consulting Services (Optional Tasks to be included in Proposal)

Task 2.1 – Project Road Development and Refinement

2.1.1 – Sediment Data Collection Planning

While the sediment transport modeling described in Subtask 1.2.2.2 will be useful for initially screening alternatives, ESA recommends that additional site-specific sediment transport data be collected over one or more years to support future phases of design and permitting. This work would be most useful if it is collected during conditions when Paradise Cut weir is overtopped, which occurs infrequently and only during the winter and spring runoff seasons. Capturing this time-sensitive data in a cost-effective manner requires planning to identify sampling locations and mobilization criteria, equipment and testing methods, and identification of analytical products that will be most useful for downstream planning and design applications.

This optional task would consist of developing a guidance and planning document for data collection components including

bed and suspended sediment sampling and bathymetry surveys on the San Joaquin River, Paradise Cut, and other locations to characterize sediment flux and gradation within the project and reaches potentially affected by the project. The proposed planning document would include a description of data collection tasks, deliverables, permitting requirements, sequencing, and timelines, as well as conceptual costs. Ideally, this work would be integrated to support SJAFCA's other projects and broader program.

2.1.2 – Road Map Development

The Wood Rodgers team will Develop a Roadmap building on the recommendations of the Feasibility Study with specific attention paid to the financial plan component. A detailed outline of the specific tasks required to progress the project through environmental compliance and permitting, engineering and design, and construction will be prepared. The Wood Rodgers Team will also include detailed estimated schedule will be prepared considering details such as, but not limited to; time required for land and easement acquisitions, the required number of various agency review and comment cycles, construction phasing and work windows, and monitoring and management of newly established habitat.

DELIVERABLES:

- ▶ Draft Project Roadmap Technical Memo.
- ▶ Final Project Roadmap Technical Memo.

Assumptions:

- ▶ The Client will provide consolidated comments on draft documents within 5 working days of receipt.

DELIVERABLES:

- ▶ Draft and Final Technical Memorandum detailing implementation considerations and costs will be delivered in electronic (PDF) format.

Task 2.2 – Support of Federal Feasibility Study

The Wood Rodgers Team will engage with the team evaluating the Mossdale Tract levee improvements for the CVFPB-SJAFCA sponsored federal feasibility study. It is understood that this task is dependent on the advancement of the Paradise Cut project in the feasibility Study.

Assumptions:

- ▶ Any work under this task will be billed on a time and material basis not to exceed \$100,000.
- ▶ Work exceeding this limit may require a separate consultant services agreement.

Task 2.3 – Development of Design Documents (30%)

Wood Rodgers, with support from HDR where appropriate,

will advance the civil design to a 30% level of completion. This includes providing greater detail in the levee alignments and embankment design, rail trestle design, site grading, weir designs, and other aspects of the preferred alternative. An expanded set of construction drawings will be prepared and submitted as part of the 30% design.

The following information is required to design the dredge work to restore conveyance and improve water quality (Anchor QEA 2021).

- Hydrodynamic and water quality modeling to determine actual flood and water supply conveyance and diversion needs and to develop resulting dredging templates; Additionally modeling can support predictions of sediment accretion rates and patterns to support planning of a long-term sediment management program.
- Updated bathymetric data (in some reaches).
- Geotechnical analyses to evaluate sediment behavior for dredging and dewatering, slope stability, and post-construction uses.
- Finalized upland site use agreements with landowners for placement of dredged sediment.
- Site-specific sediment characterization analysis.
- Confirmation of final regulatory requirements as they apply to specific sites.

This task includes development of the preferred alternative's 30% conceptual level design drawings, input into a basis of design memorandum, including an estimate of probable cost for the channel dredging and beneficial use of the material for levee improvements. Anchor QEA will prepare conceptual 30% design documents consisting of a plan figure depicting the dredging template (dredging elevations and horizontal extents) and existing bathymetric information from the hydrographic condition survey (provided by other team members), as well as the estimated dredging volume. The information will be presented in a brief Basis of Design memorandum, along with an estimate of probable cost. These documents will be the basis for the regulatory permit applications. A table of contents of the anticipated technical specifications will be included in the 30% package.

At 30% design, Anchor QEA will determine the dredging method (hydraulic cutterhead versus mechanical) typically determined by construction logistics such as design elevations and volumes, site access, environmental quality of dredged sediment and effluent water, the availability of sediment temporary dewatering and stockpiling sites, and permanent placement sites or landfill disposal sites. Regulatory permit conditions, cost, and contractor equipment availability may also play major roles in the decision. Anchor QEA will also consider the approximate 160 diversion systems located along the Planning Guide's considered channels, as each of these may require protection during dredging.

Anchor QEA will utilize existing relationships with dredging contractors with Delta experience and suitable equipment to ensure the design considers available resources in the Delta.

DELIVERABLES:

- ▶ Meeting Notes for attended meetings.
- ▶ Text based on the dredging sections from the Planning Guide revised for incorporation into the Feasibility Study.
- ▶ 30% Opinion of Probable Cost for the Dredge Design.
- ▶ 30% Design Drawings, Opinion of Probable Cost, brief Basis of Design Memorandum, and Technical Specification Table of Contents.

Assumptions:

- ▶ The level of detail associated with the 30% design package will be dependent on the complexity of the selected preferred alternative, including the chosen beneficial use or disposal method (i.e., levee improvements may require additional design compared to hauling and disposal at a landfill).
- ▶ A site inspection of the channels to identify accessibility for dredge equipment is not included, but may be useful and is suggested for adding at the 30% design stage.

2.3.1 – 30% Habitat Restoration Design Package

If desired, following completion of Task 5 (Preliminary Engineering and Landscape Designs), ESA would progress the Paradise Cut restoration design to the 30%-complete design level. For this project, we would propose using an approach and workflow similar to what has worked successfully for the ongoing **Mossdale Tract Area Urban Flood Risk Reduction (UFRR) Project**.

Assuming site access is permitted, the team would initiate detailed site reconnaissance of the Paradise Cut corridor to document geomorphic field conditions related to erosion, sedimentation, and existing fish stranding potential. We also propose the team perform field mapping to identify portions of the Paradise Cut corridor where existing bank protection might be removed or enhanced to create Shaded Riverine Aquatic (SRA) habitat. On an as-needed basis, the team would propose targeted topographic verification surveys in areas obscured by vegetation or shallow water, particularly along channel banks. Tree surveys would also be conducted within proposed grading areas to avoid or minimize impacts that trigger mitigation.

ESA will develop a 30% restoration design plan set and will identify habitat features, the range of stream flows at which habitat will be connected, and how geomorphic and hydraulic processes will maintain target habitat and function. As the site grading and design features are refined, the County will perform hydraulic modeling and hydro-spatial analysis to confirm that the project features satisfy relevant ecological design criteria (depth, velocity, inundation frequency and duration, etc.) for the target species and habitat types. Consideration will include how flows

will inundate the floodplain and how the floodplain is anticipated to evolve over time. Under this task, potential on- and off-site soil disposal considerations within the Paradise Cut corridor will be reviewed with SJAFCA and DWR.

The exact approach for the restoration design will depend on the outcomes of the previous planning and design tasks. For planning purposes, we have assumed design of up to 20 sites and budgeted for up to 73 sheets as outlined in Table 2 below.

A 30%-level estimate of quantities related to restoration activities (e.g., earthwork, planting, etc.) will be developed with additional input from Wood Rodgers and River Partners, as needed.

Work would be organized and managed by the following subtasks:

SUBTASK OUTLINE:

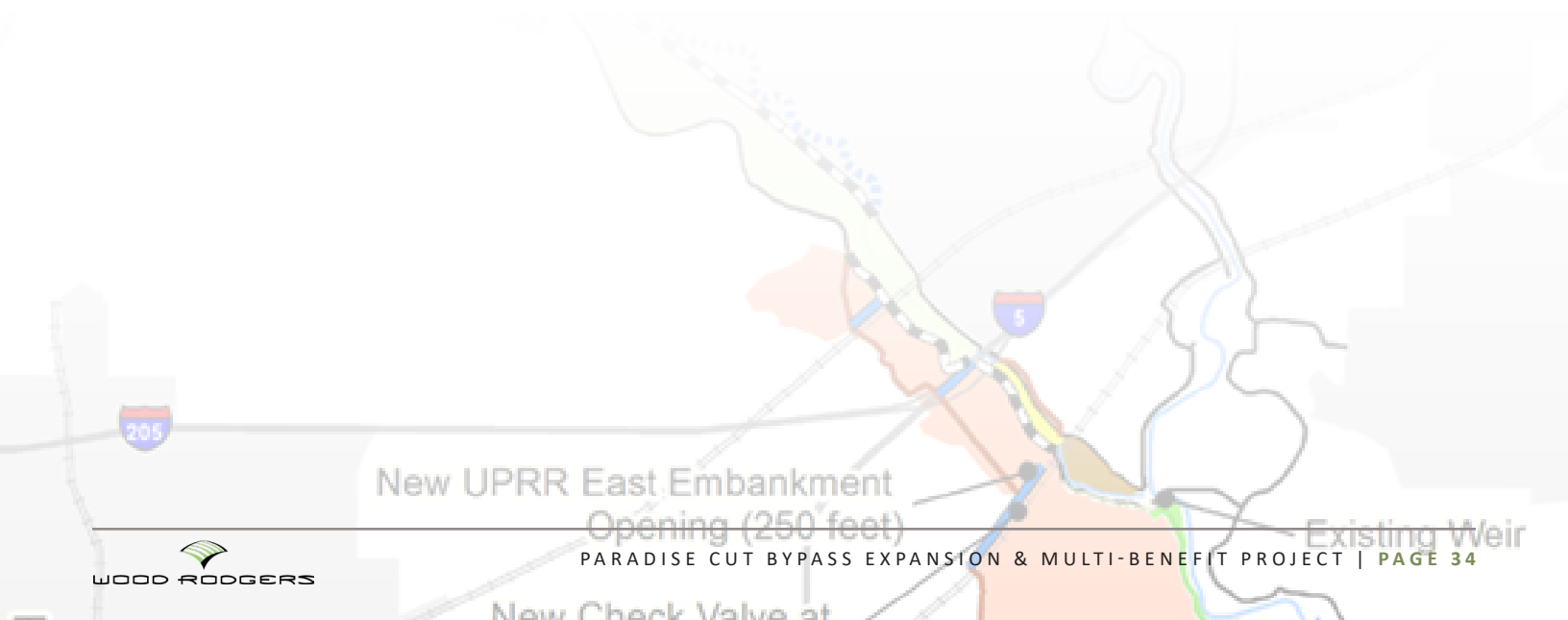
- 1. Geomorphic Reconnaissance and Field Design Review
- 2. Site Surveys (As Needed)
- 3. Tree Surveys
- 4. Vegetation/Habitat Mapping
- 5. Restoration Hydrologic and Hydraulic Analysis
- 6. Restoration Design Plans (30%-complete design level)
- 7. Opinion of Anticipated Costs (30%-complete design level)
- 8. Basis of Design Report (30%-complete design level)
- 9. Meetings and Coordination

DELIVERABLES

- ▶ Draft and final 30%-complete design plans.
- ▶ Draft and final opinion of anticipated costs (30%-complete design level).
- ▶ ESA will present in-progress analyses and work products to SJAFCA and the project team during regularly scheduled web-based video conference meetings. Comments on these components will be documented and addressed during preparation of the Draft Basis of Design Report (30%-complete design level).
- ▶ Draft and Final Basis of Design Report (30%-complete design level) delivered in electronic (PDF) format. The document will provide a concise description of the process used to progress the restoration design and present refined quantities estimates and opinion of probable costs. This document will be adapted and refined as the design process progresses.
- ▶ Digital files associated with special surveys, habitat modeling, and design (e.g. CAD, GIS, etc.) will be made available on request.
- ▶ Presentations, meeting notes, and other materials developed for the project will be made available electronically on request.

Assumptions:

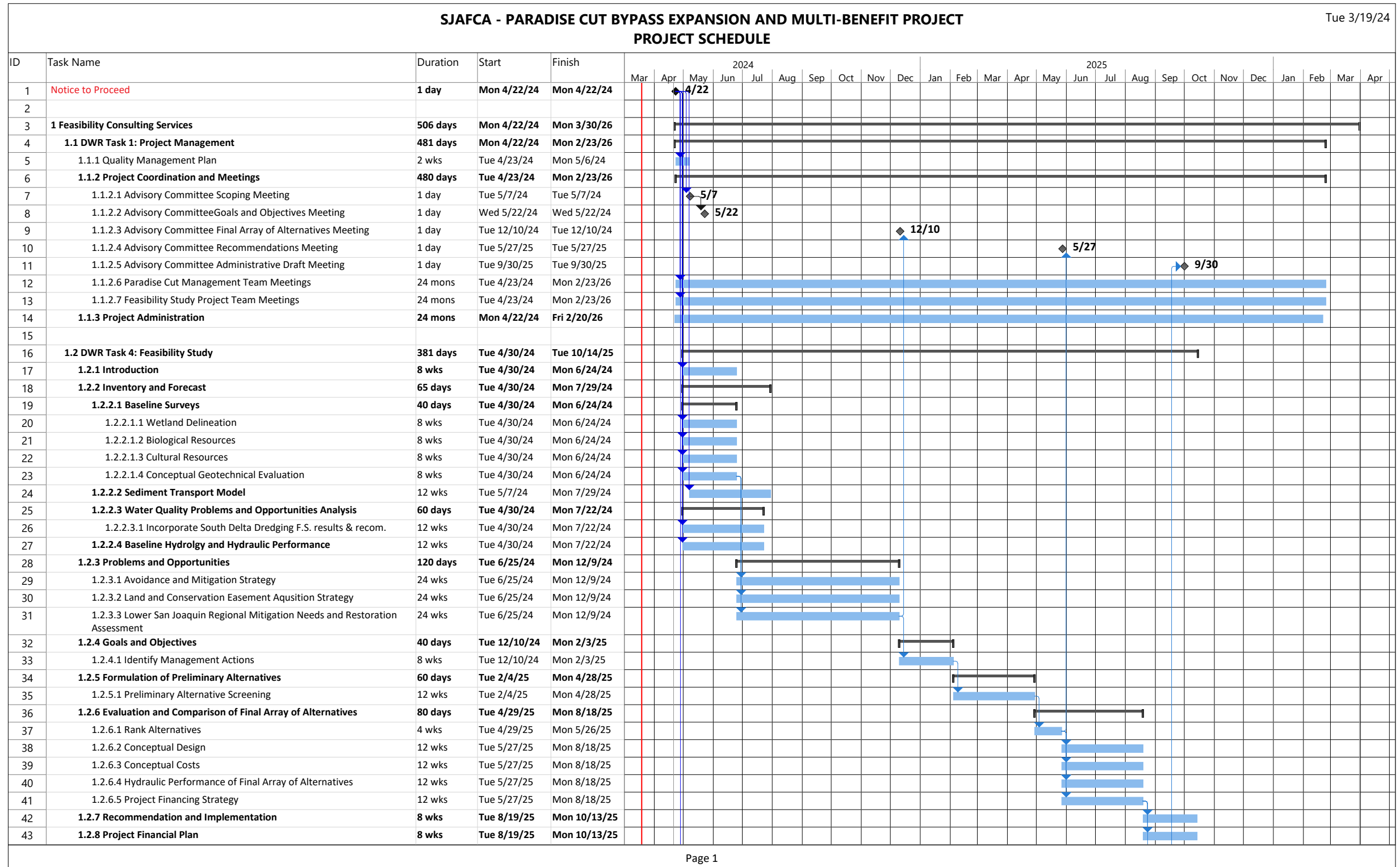
- ▶ ESA assumes restoration design for up to twenty (20) sites to be developed under the 30%-complete design level.
- ▶ 30% restoration design will rely largely on data collected during the previous phase. Supplemental topographic surveys, aerial imagery, utility surveys, ROWs, and other boundary information are assumed to be collected by Wood Rodgers or others. All survey control would be provided by Wood Rodgers or others.
- ▶ ESA assumes that any basis of design report (BODR) documentation will be developed at a 30%-complete design level of detail and amended through subsequent phases of design.
- ▶ DWR comments on Draft 30% Design and Opinion of Anticipated Cost will be collated and provided in a single spreadsheet document. For budgeting and schedule purposes, one (1) round of comments and responses with SJAFCA and DWR is assumed, which will be addressed during the subsequent 60% design milestone.





F. LEVEL OF EFFORT & SCHEDULE

SECTION F | LEVEL OF EFFORT & SCHEDULE



SCHEDULE, CONTINUED.

SJAFCA - PARADISE CUT BYPASS EXPANSION AND MULTI-BENEFIT PROJECT											Tue 3/19/24																			
PROJECT SCHEDULE																														
ID	Task Name	Duration	Start	Finish	2024												2025													
					Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
44	1.2.9 Recommended Next Steps	8 wks	Tue 8/19/25	Mon 10/13/25																										
45	1.2.10 Prepare Feasibility Report	8 wks	Tue 8/19/25	Mon 10/13/25																										
46	FS Complete	1 day	Tue 10/14/25	Tue 10/14/25																										
47																														
48	1.3 DWR Task 5: Preliminary Engineering and Landscape Design	120 days	Tue 10/14/25	Mon 3/30/26																										
49	1.3.1 Preliminary Designs and Cost Estimates	120 days	Tue 10/14/25	Mon 3/30/26																										
50	1.3.1.1 Preliminary Lanscapescape-scale Multi-benefit Restoration Plan(10%)	6 mons	Tue 10/14/25	Mon 3/30/26																										
51	1.3.1.2 Preliminary Civil Design (10%)	6 mons	Tue 10/14/25	Mon 3/30/26																										
52	1.3.1.3 Preliminary Cost Estimate (10%)	6 mons	Tue 10/14/25	Mon 3/30/26																										
53																														
54	2 Feasibility Consulting Services (Optional Tasks to be included in Proposal)	480 days	Tue 4/23/24	Mon 2/23/26																										
55	2.1 Project Roadmap Development and Refinement	24 mons	Tue 4/23/24	Mon 2/23/26																										
56	2.2 Support for Federal Feasibility Study	24 mons	Tue 4/23/24	Mon 2/23/26																										
57	2.3 Development of Design Documents	24 mons	Tue 4/23/24	Mon 2/23/26																										

LEVEL OF EFFORT

Consulting Services for Paradise Cut Byass Expansion and Multi-Benefit Project Estimated Level of Effort - Wood Rodgers Team

Labor Classification	Total Team Labor Hours	Wood Rodgers (Total Hours)	Anchor QEA (Total Hours)	ESA (Total Hours)	HDR (Total Hours)	ICF (Total Hours)	MBK (Total Hours)	River Partners (Total Hours)
1 Feasibility Consulting Services	7,895	2,256	680	948	1,705	1,234	636	436
1.1 DWR Task 1: Project Management	1,208	604	80	-	292	-	112	120
1.1.1 Quality Management Plan	48	46	-	-	2	-	-	-
1.1.2 Project Coordination and Workshop / Meetings	32	-	-	-	-	-	32	-
1.1.2.1 Advisory Committee Scoping Workshop	68	44	-	-	20	-	4	-
1.1.2.2 Advisory Committee Goals and Objectives Workshop	68	44	-	-	20	-	4	-
1.1.2.3 Advisory Committee Final Array of Alternatives Workshop	60	44	-	-	12	-	4	-
1.1.2.4 Advisory Committee Recommendations Workshop	70	44	10	-	12	-	4	-
1.1.2.5 Advisory Committee Administrative Draft Workshop	60	44	-	-	12	-	4	-
1.1.2.6 Paradise Cut Management Team Workshop	149	64	10	-	30	-	30	15
1.1.2.7 Feasibility Study Project Team Meetings	219	64	30	-	60	-	30	35
1.1.3 Project Administration	434	210	30	-	124	-	-	70
1.2 DWR Task 4: Feasibility Study	4,958	1,082	340	548	1,290	960	488	250
1.2.1 Introduction	37	32	-	-	5	-	-	-
1.2.2 Inventory and Forecast	136	12	-	-	124	-	-	-
1.2.2.1 Baseline Surveys	-	-	-	-	-	-	-	-
1.2.2.1.1 Wetland Delineation	328	8	-	-	-	320	-	-
1.2.2.1.2 Biological Resources	328	8	-	-	-	320	-	-
1.2.2.1.3 Cultural Resources	328	8	-	-	-	320	-	-
1.2.2.1.4 Conceptual Geotechnical Evaluation	148	106	-	-	42	-	-	-
1.2.2.2 Sediment Transport Model	556	8	-	548	-	-	-	-
1.2.2.3 Water Quality Problems and Opportunities Analysis	64	8	56	-	-	-	-	-
1.2.2.3.1 Incorporate South Delta Dredging F.S. results & recommendations	84	8	76	-	-	-	-	-
1.2.2.4 Baseline Hydrology and Hydraulic Performance	66	8	-	-	-	-	48	10
1.2.3 Problems and Opportunities	23	8	-	-	15	-	-	-
1.2.3.1 Avoidance and Mitigation Strategy	48	8	40	-	-	-	-	-
1.2.3.2 Land and Conservation Easement Acquisition Strategy	108	8	-	-	-	-	-	100
1.2.3.3 Lower San Joaquin Regional Mitigation Needs and Restoration Assessment- (also need to evaluate constraints and opportunities from Phase 2 Planning	48	8	-	-	-	-	-	40
1.2.4 Goals and Objectives	118	8	-	-	110	-	-	-
1.2.4.1 Identify Management Actions	157	8	-	-	129	-	-	20
1.2.5 Formulation of Preliminary Alternatives	299	8	168	-	123	-	-	-
1.2.5.1 Preliminary Alternative Screening	192	8	-	-	164	-	-	20
1.2.6 Evaluation and Comparison of Final Array of Alternatives	143	24	-	-	119	-	-	-
1.2.6.1 Rank Alternatives	134	44	-	-	50	-	-	40
1.2.6.2 Conceptual Design	401	324	-	-	57	-	-	20
1.2.6.3 Conceptual Costs	84	84	-	-	-	-	-	-
1.2.6.4 Hydraulic Performance of Final Array of Alternatives	472	32	-	-	-	-	440	-
1.2.6.5 Project Financing Strategy	76	76	-	-	-	-	-	-
1.2.7 Recommendation and Implementation	146	88	-	-	58	-	-	-
1.2.8 Project Financial Plan	64	64	-	-	-	-	-	-
1.2.9 Prepare Feasibility Report	370	76	-	-	294	-	-	-
1.3 DWR Task 5: Preliminary Engineering and Landscape Design	1,729	570	260	400	123	274	36	66
1.3.1 Preliminary Designs and Cost Estimates	-	-	-	-	-	-	-	-
1.3.1.1 Preliminary Landscape-scale Multi-benefit Restoration Plan(10%)	584	-	-	400	-	118	-	66
1.3.1.2 Preliminary Civil Design(10%)	865	412	176	-	123	118	36	-
1.3.1.3 Preliminary Cost Estimate (10%)	280	158	84	-	-	38	-	-
2 Feasibility Consulting Services (Optional Tasks to be included in Proposal)	4,676	710	436	3,530	-	-	-	-
2.1 Project Roadmap Development and Refinement	16	-	16	-	-	-	-	-
2.1.1 Sediment Data Collection Planning	140	-	-	140	-	-	-	-
2.1.2 Project Roadmap Development	80	-	-	80	-	-	-	-
2.2 Support for Federal Feasibility Study	164	140	24	-	-	-	-	-
2.3 Development of Design Documents	4,276	570	396	3,310	-	-	-	-
TOTAL (including Optional Tasks)	12,571	2,966	1,116	4,478	1,705	1,234	636	436

Total Hours Tasks 1, 4, and 5 = 7,895
 Total Hours Tasks 1, 4, 5, and Optional Task = 12,571

CONSERO SOLUTIONS: DRAFT SCOPE OF WORK:

2. SCOPE OF WORK

Consero proposes the following scope of work to complete Task 3 of the Work Plan in the funding agreement between SJAFCA and the DWR (DWR Work Plan). Please note Consero uses the words “interested parties” rather than “stakeholders” to avoid sensitivities around this language.

Task 1: Engagement Strategy

Consero will create an engagement strategy for the Paradise Cut Expansion and South Delta Restoration Project in collaboration with the Paradise Cut Management Team (PCMT). The engagement strategy will identify key interested parties, including their interests, concerns, and level of influence; establish goals and objectives for community engagement, including measurable outcomes and success criteria; outline engagement methods and channels; define processes for feedback collection, documentation, and integration; and propose a timeline for engagement throughout the project lifespan. Consero will meet with the PCMT to discuss the engagement strategy at a regularly scheduled meeting and deliver a first draft within two weeks. The PCMT will have the opportunity to provide final feedback on the engagement strategy at another regular meeting. Consero will help the PCMT bring a draft to the Advisory Committee for review, incorporate Advisory Committee comments, and produce a final draft of the engagement strategy. The engagement strategy is a living document and the PCMT may choose to update the strategy in coordination with the Advisory Committee as needed.

Task 1 Deliverables:

- Two (2) drafts of the engagement strategy
- One (1) final engagement strategy
- Up to five (5) updates of the engagement strategy if needed

Task 2: Project Meeting Facilitation

Consero will facilitate all meetings related to the Paradise Cut Expansion and South Delta Restoration Project as assigned by the PCMT. Ms. Marchand will act as lead facilitator for PCMT meetings, Advisory Committee meetings, and Steering Committee meetings as assigned. The Consero team will develop agendas designed to elicit actions and decisions at least five days in advance of meetings and provide summaries with meeting highlights, actions, and decisions within one week of meetings. Consero also will follow up on action items, which Consero will track using the online project management software Asana. Consero will document decisions from each meeting in a decision tracking spreadsheet for easy reference. As needed, Consero will create PowerPoint presentations for the Advisory Committee and Steering Committee meetings for review and approval by the PCMT. Consero assumes PCMT meetings will occur biweekly, Advisory Committee meetings will occur every other month and Steering Committee meetings will occur quarterly between April 2024 and December 2025.

Task 2 Deliverables:

- Meeting materials and facilitation of up to forty (40) PCMT meetings
- Meeting materials (including PowerPoint presentation) and facilitation for up to ten (10) Advisory Committee meetings

- Meeting materials (including PowerPoint presentation) and facilitation for up to six (6) Steering Committee meetings

Task 3: Governance Charter Support

Consero will support the project manager selected to implement Task 1 in the DWR Work Plan, as well as the PCMT, to develop the governance charter for the Paradise Cut Expansion and South Delta Restoration Project and ensure consistency with the community engagement strategy. Such work could include advice regarding membership, scope, authority, decision-making process, elevation process, and communication channels for the PCMT or other governance needs as requested. Consero supported a similar effort for Phase 2 of the project, so will leverage Consero's knowledge and involvement in development of the existing Memorandum of Understanding to support development of the governance charter consistent with the community engagement strategy.

Task 3 Deliverables:

- Up to two (2) meetings to support development of the governance charter consistent with the community engagement strategy
- Up to two (2) rounds of edits to the charter

Task 4: Public Outreach

Consistent with the community engagement strategy, Consero will develop materials for and facilitate community engagement efforts related to the project. Consero recommends editing the feasibility study for clarity and organization, hosting small group meetings with reclamation districts to review the draft feasibility study, holding public workshops, and providing short, virtual, semi-annual newsletters to provide updates to the community. Consero implemented a similar strategy for Phase 2 of the Paradise Cut Expansion and South Delta Restoration Project, except for the newsletters.

- Edits to Feasibility Study Drafts. Consero will edit feasibility study drafts to ensure the information is well organized and accessible to the public. From Consero's experience working with consultants to produce technical documents and communicate the information to the public, it is essential to ensure the feasibility study clearly defines terms, avoids jargon, states the main conclusions upfront, and uses clear language to communicate difficult concepts. If the feasibility study is clearly written, it is much easier (and less expensive) to conduct public outreach, so this is a key component of Consero's community engagement strategy. Consero has a long history of editing technical documents for public consumption.

- Small Group Meetings. Consero recommends the PCMT host small group meetings with reclamation districts and other affected/interested parties. Due to the differing impacts upstream versus downstream of the project, Consero recommends PCMT meet twice with reclamation districts downstream of the project and once per year with reclamation districts upstream from the project. Ms. Marchand will facilitate these small group meetings and Consero will provide materials including agendas, meeting summaries, and other materials as needed.
- Public Workshops. Consero recommends the PCMT host two public information workshops, one to coincide with public review of the draft feasibility study and a second on to provide an update on the final feasibility study before the PCMT brings the final feasibility study to the Advisory Committee and SJAFCA Board of Directors for approval. Consero will provide invitations/flyers for these workshops and support the PCMT in distributing the information to the community. Consero also will develop presentation materials including agendas, draft and final talking points, and draft and final slide decks. Consero will staff the workshops including set up, printing and distribution of materials, note taking, and clean up. Ms. Marchand will facilitate the workshops and assist other speakers with their talking points.
- Newsletters. Consero will also develop a semi-annual virtual newsletter to keep interested/affected parties apprised of the project's progress. Consero will work with the PCMT to develop content for the newsletters, provide a draft, integrate changes, and provide a final version for distribution to interested/affected parties.

As needed, Consero will field public inquiry including drafting email responses to questions/comments from the public.

Task 4 Deliverables:

- Two (2) rounds of edits to the draft feasibility study and one (1) round of edits to the final feasibility study
- Meeting materials and facilitation for up to ten (10) small group meetings
- Meeting materials, facilitation, and staffing of up to two (2) public workshops
- Up to two (2) draft sets of talking points
- Up to two (2) final sets of talking points
- Up to two (2) draft PowerPoint slide decks
- Up to two (2) final PowerPoint slide decks
- Up to four (4) draft virtual newsletters
- Up to four (4) final virtual newsletters

Task 5: Other Support As Assigned

Consero will provide additional support as needed. Examples include assisting with presentation materials for PCMT members' attendance at other meetings, fielding public inquiry including drafting email responses to questions/comments from the public, or attending additional meetings related to the project, but not mentioned above.

Task 5 Deliverables:

- Up to two (2) draft PowerPoints
- Up to two (2) final PowerPoints
- Up to ten (10) draft email responses to public comments/questions
- One draft and final Frequently Asked Questions (FAQs) document
- Up to two (2) updates to FAQs document
- Attendance and/or facilitation at up to four (4) additional meetings

Scope of Services

This proposal includes an estimated level of effort to provide project management support for Paradise Cut Bypass Expansion and Multi-Benefit Project. It aims to anticipate the client's needs from the initiation of the Feasibility Study through the completion of DWR agreement. If additional work is required, LWA will notify the client of the change and seek to negotiate a task order amendment based on a revised Scope of Services and budget.

The proposed term associated with this proposal is about 20 months, ending on December 31st, 2025 with the expiration of the DWR agreement. This term may be extended as needed through a task order modification agreed to in writing by both parties.

Paradise Cut Bypass Expansion and Multi-Benefit Project Support

SJAFCA, in partnership with several agencies and key stakeholders, is seeking to advance a multi-objective project for Paradise Cut. This project seeks to strike a balance between flood risk reduction, habitat restoration, protecting farmland, improving irrigation intake reliability and waterway navigability, and improving water supply reliability. Key agencies and interested parties include the State of California, neighboring Reclamation Districts, local resource agencies, and several nongovernmental organizations.

LWA is responsible to provide advice and subject matter expertise to SJAFCA, as requested, to support the development of and secure commitments to deliver the Paradise Cut project. This responsibility includes clearly articulating project benefits and risks, researching projects and programs of similar scope to identify lessons learned, participating in and/or facilitating communication with critical agencies and stakeholders, and assisting in the development of scopes of work and agreements that support project implementation in future project phases. Specific examples of anticipated support services include:

- Attend meetings with (or on behalf of) SJAFCA to develop a strategy for successfully achieving project commitments, financing, agency outreach, project governance, and implementation/delivery. Support project execution through tracking and management of the project schedule, scope, and budget.
- Represent SJAFCA, as requested, in project discussions with key federal, state and/or local agencies or stakeholders concerning the Project and how it supports broader efforts like the USACE Lower San Joaquin River Lathrop and Manteca Feasibility Study. This effort may include the development of work products intended to help facilitate and advance project development, financing, or implementation.
- Attend and facilitate, as requested, meetings with SJAFCA, the Paradise Cut Management Team, the Advisory Committee, the feasibility study technical team, and the Technical Review Panel. Attend other study meetings with the public, stakeholders, or affected agencies. Collaborate with SJAFCA and other team members regarding how to communicate study content effectively and how to successfully resolve identified issues.
- Synthesize and summarize study progress for progress reporting to the SJAFCA, the Paradise Cut Management Team, the Advisory Committee, and DWR. Facilitate communication and decision-making.

- Coordinate the review of interim study deliverables and supporting technical documents by the feasibility study technical team.

Fee Estimate

LWA's cost proposal for the services outlined is presented in the sealed envelope accompanying this proposal.

LWA charges for its services on a direct cost of time and expenses basis up to a mutually agreed upon budget amount. The level of effort required is based upon LWA's best estimate of the described scope of services. LWA will work efficiently to manage the costs for this effort. LWA will communicate frequently with SJAFCA and will provide, on at least a monthly basis, an update of the cumulative expenditures against the approved budgeted amount to provide as much advance notice as possible if it is determined that the cost of the services could exceed the approved budget.