

## Memorandum

To: Jarrett Martin, General Manager, Central California Irrigation District (CCID)  
Anthea Hansen, General Manager Del Puerto Water District (DPWD)  
Steve Chedester, Director of Policies and Programs, San Joaquin River Exchange  
Contractors Water Authority (SJRECWA)

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From: Rick Iger

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Subject: **Orestimba Creek Recharge and Recovery Expansion Project – Status Update**

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Date: April 21, 2021

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**Bold text represents information added since the previous memorandum.**

### Background:

The SJRECWA has identified a water supply/storage goal of 50,000 acre-feet and a peaking capacity goal of 500 cfs to avoid impacts from Critical Years, source shifting to the San Joaquin River (SJR), or restrictions on pooling water for peak irrigation demand. Studies and Pilot Program tests have determined that the potential recharge capability of Orestimba Creek alluvial fan is suitable to help meet those goals. In addition, due to shortages in the Central Valley Project (CVP), Del Puerto Water District (DPWD) is seeking recharge and recovery to help alleviate future shortages. As a result of the mutual interests, the Exchange Contractors and DPWD have partnered to complete a project to help achieve progress toward meeting those goals.

The Orestimba Creek Recharge and Recovery Expansion Project (Expansion Project) proposes to expand the existing 20-acre groundwater recharge facility near Orestimba Creek to about 80 acres. This project would store high flow and carryover supplies which would include groundwater replenishment to offset nearby groundwater demands as well as regulate supplies to provide a critical year water supply and provide water to meet peak demands in the summer.

The project participants include CCID, DPWD, and SJRECWA. Provost & Pritchard (P&P) was retained to assist in designing, permitting and environmental compliance sufficient to enable construction of the project. The Project is moving forward under CCID's lead on behalf of the SJRECWA with cost sharing with DPWD. Each entity has been paying their own expenses for its respective role.

CCID has received several grants to move the project forward beyond the feasibility level to initiate construction of the expanded project. **In 2020, CCID received a Grant Award of \$809,000 from the Integrated Regional Water Management Plan (IRWMP) State Grant Program to assist in development of the Expansion Project. In February 2021 CCID also received contingent award under the Stormwater Grant Program administered by the State Water Resources Control Board (SWRCB) of \$5.6 Million for construction of the Expansion Project. The project will consist of an additional 60-acres of recharge ponds, use of existing DPWD turnouts from the Delta-Mendota Canal (DMC), a proposed turnout from Orestimba Creek, and new pipelines to convey the flows to the recharge ponds. Additionally, the project**

**includes completion and use of wells sufficient to recover the water stored in two consecutive dry/critical years. For purposes of the environmental analysis 8 recovery wells which are proposed to be designed by Kenneth D. Schmidt and Associates (KDSA) and District staff, well discharges and appurtenances, and associated pipelines have been included. Analysis of construction and operations of conveyance, recharge and recovery facilities will be included in the environmental and permitting documents.**

### **Current Work:**

While developing the specific budget and agreements, the participants authorized phasing the work to quickly develop the 30% design and flush out any major permitting or environmental concerns including developing a coordinated effort with the Bureau of Reclamation (USBR) on CEQA/NEPA compliance so Reclamation can evaluate the feasibility of continuing with the project to completion. Phase 1 consists of bringing the project design to 30%, a topographic survey, downloading required permit applications, and coordinating with USBR on CEQA/NEPA compliance and work within DMC right-of-way.

Work started on October 15, 2020 with the project kick-off meeting with staff from CCID, DPWD, SJRECWA and P&P in attendance. We discussed project administration, schedule, design components, permitting and environmental work coordination. During the meeting there was significant discussion regarding the various components and proposed alignments. The plan was to have the 30% design complete by mid-December; however, access agreements for survey work required from various landowners and agencies took longer than expected to get in place. The Districts are working on overall well location plan. Well locations are a critical path item for moving forward with environmental and permitting work. Biological, cultural, and geotechnical studies will need to be completed for all components including well locations. Once well locations have been identified, all access agreements will need to be amended to allow for ground disturbing activities before these studies can be completed. The following is a list of work activities with descriptions of work completed to date.

#### 1. Landowner Outreach

- a. State: The State of California Department of Water Resources (DWR) owns the property between Bell Road and I-5 along Orestimba Creek. Right of Entry for the Orestimba Creek Turnout has been issued for non-ground disturbing activity which included topographic survey of the turnout site. Need to determine timing of Biological and Cultural Field work and get back to State et al. Same for Geotech. All on hold for well locations. Ground disturbing field work is on hold until well sites are identified. **CCID has requested an amended Temporary Entry Permit from DWR for Biological and Cultural surveys. The proposed schedule is for April 26 to June 30 in case follow-up surveys are needed.**
- b. Private landowners: Participants are setting appointments with landowners for well sites and surveys. Alternative Pipeline alignments also needed to be surveyed and discussed with three landowners along the routes. Meetings have been held and survey of pipeline routes are completed. **Meetings have been held with several property owners from Bell Road to the CCID Main Canal. Potential joint use of existing wells and new well sites were discussed. Based on those discussions, the Participants are exploring recovery well target locations east and north of the recharge ponds.**
- c. SLDMWA: Right of Entry request approved provided no ground disturbance. Need to initiate amending for the ground disturbing activities for Biological and Cultural surveys. Questions regarding use of the existing box culvert under the DMC at Bell Road and

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- placing facilities within DMC property will be coordinated with SLDMWA and USBR. **CCID has requested and received an amended Temporary Entry Permit from SLDMWA for the proposed schedule for Biological and Cultural surveys, April 26 to May 7, 2021.**
- d. USBR: Right of Entry agreement approved for Surveys provided no ground disturbance. Need to initiate amending for the ground disturbing activities for Biological and Cultural Surveys. ~~USBR defers to SLDMWA for processing Temporary Entrance Permits.~~ **CCID has requested and received an amended Temporary Entry Permit from SLDMWA for the proposed schedule for Biological and Cultural surveys, April 26 to May 7, 2021. The Cultural sub-contractors submit a separate request directly to USBR for the specifics of their work.**
2. USBR Coordination
- a. Letter of Agreement (LOA): USBR is developing a cost estimate to include in the LOA. USBR requested copy of survey map with preferred pipeline route plotted and white papers on potential conveyance of Orestimba Creek water in DMC and other Participants' water sources for recharge. SJRECWA has white paper from LBCDR Storage POC and will update for Orestimba. Participants drafted white paper on conveying Orestimba flow in DMC, being reviewed up chain of command at Reclamation. Steve Chedester taking the lead on this effort. Once LOA executed need to set up virtual tour with USBR staff. **The LOA was executed at the end of February, allowing Reclamation Staff to work on the permitting and environmental documents.**
- b. CEQA/NEPA: Initial discussions with USBR have started on a joint CEQA/NEPA document. USBR has provided the new format and P&P has submitted a revised project description. Awaiting LOA execution for launch of Joint Document preparation. **Discussions have been occurring weekly on the project description and Area of Potential Effect (APE). The Project Description has been updated to reflect new components of the project and the proposed operations plan. P&P staff is coordinating merging the project description into the Joint CEQA/NEPA document.**
- c. Initial Draft Project Description: Sent to Participants and Reclamation. Reclamation requested insertion of water source in Project description and possible need for a Warren Act Contract or other DMC wheeling/exchange arrangement. **The Project Description summary was described to Reclamation over a series of meetings and submitted with edits on April 9, 2021.**
3. Permits
- a. Downloaded and began filling in the following permit applications:
- i. Lake and Streambed Alteration Notification from CDFW
  - ii. 404 Permit from USACE
  - iii. 401 Water Quality Certifications from RWQCB
  - iv. License Agreement Permit from USBR
  - v. MP620 Permit from USBR for additions or alterations to USBR owned facilities.
  - vi. Encroachment Permits from Stanislaus County for pipelines crossing County Roads.
4. Design
- a. Topographic Survey: Survey has been completed for Orestimba Creek turnout, pipelines, ponds, and pump station.
- b. Design Criteria Memo: the draft design criteria memo will be completed and submitted to Participants for review during last week of January 2021.
- c. Plans: 30% plans will be completed and submitted to Participants for review during last week of January 2021.

- d. **The 30% design memo and plans were submitted to Participants on February 4, 2021 and reviewed in a couple of workshops with final comments received on February 18, 2021.**
  - e. **After meeting with Reclamation and several landowners along the pipeline routes to the recharge ponds, additional modifications to the design were warranted including placing the north-south pipeline outside of Reclamation property and removing and replacing DMC turnout control boxes to accommodate larger pipeline connections.**
  - f. **A workshop was held with the Participants to evaluate the recharge pond sizing and recovery goals. A spreadsheet was developed to look at how many acres of ponds and sizes of pipelines were needed to meet the goal of recovering 10,000 Acre Feet per year during two consecutive dry and/or critical water supply years. The decision was made to size the facilities to absorb 22,000 Acre Feet in a wet year, where water would be available to the Participants over 150 days. The results showed that 80 Acres were needed at the recharge rate of 2.0 Feet per Day, and that 80 cfs could be delivered with the pipes as sized in the Design Memorandum:**
    - i. **35 cfs from Orestimba Creek Turn Out and Booster Pumps into a 36" pipe running north to south to the junction with the MP 51.65L pipe;**
    - ii. **35 cfs from DMC TO at MP 51.65L into a 36" pipe transitioning to 48" where the Orestimba pipe intersects; and**
    - iii. **35 cfs from DMC TO at MP 52.40L into a 36" pipe along Orestimba Road.**
5. Other Items
- a. **Prop 68 Grant Application: Project Description info has been provided to Woodard and Curran who are assisting the Coordinated Delta-Mendota Basin Group submit a DWR Prop 68 SGMA Grant Application. Orestimba Description for current IRWM Grant included 35 cfs conveyance to ponds. Prop 68 was similar description as IRWMP Grant Application. The Prop 68 application has about \$1M in grant request and construction of full project with local/other cost share. The Project Description is the same as IRWM grant which provided \$809,000 Grant Award. **The Prop 68 Grant was not awarded for the Delta-Mendota Application, a technical review is underway to see if DWR missed something in understanding the projects.****
  - b. **The Storm Water Grant contingent award required some follow up on the grant agreement, budgets, schedule and budget narratives. Those went to Woodard and Curran between April 5<sup>th</sup> and April 15<sup>th</sup> and have been submitted by them and CCID back to the State Board.**

## Next Steps:

- 1. Actions required by Participants:
  - a. Review and provide comments on Design Criteria Memo and finalize proposed facility locations and capacities. **DONE.**
  - b. Review and provide comments on 30% plans. **DONE.**
  - c. Determine locations for recovery wells. **Ongoing; refine sites with KDSA and meet with specific owners.**
  - d. Assist with obtaining Right of Access agreements for ground disturbing biological, cultural, and geotechnical investigations. **Ongoing.**
- 2. Actions required by P&P:

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- a. Once well locations have been determined and remaining right of entry agreements have been approved, complete field survey work with Geotechnical, Biological and Cultural Subconsultants. **Ongoing.**
  - b. Finalize Design Criteria Memo and 30% plans based on Participant comments. **DONE.**
  - c. Work with Participants, agencies, and landowners to amend **temporary** right of entry permits for ground disturbing activities. **Ongoing.**
  - d. Incorporate final facility locations, and biological and cultural investigations into draft environmental document. **P&P will work with Participants and Reclamation on merging the new Project Description into the CEQA/NEPA document and incorporate results of biological and cultural investigations once complete in mid May. Project component changes will be discussed with Reclamation on April 23<sup>rd</sup>.**
  - e. Continue preparation of draft permit applications. **Ongoing.**
  - f. Once directed by the Participants, prepare draft specifications and 60% plans. **Started 60% plan drawings March 3, 2021.**
3. Actions required by others:
- a. Once well locations have been determined and right of entry agreements have been amended for ground disturbing activities, perform geotechnical investigation.
  - b. Once well locations have been determined and right of entry agreements have been amended for ground disturbing activities, perform biological investigation.
  - c. Once well locations have been determined and right of entry agreements have been amended for ground disturbing activities, perform cultural investigation.
  - d. USBR to finalize LOA and associated budget for review and payment of deposit by Participants. **DONE.**
  - e. USBR Environmental team to have a kick-off meeting with P&P and Participants. **DONE.**
  - f. USBR and SJRECWA Land and Right of Way team to have virtual tour of project facilities with P&P and Participants. **DONE with Reclamation; still need to meet with SLDMWA.**

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COMMITMENT & INTEGRITY DRIVE RESULTS

# Progress Report

## Grant Administration for Proposition 1 Storm Water Grant

**Subject:** Progress Report – March 2021

**Prepared for:** Jarrett Martin/Central California Irrigation District

**Prepared by:** Natalie Cochran

**Date:** April 7, 2021

**Project No.:** 0011975.00

This progress report summarizes the work performed and project status for **the period ending March 26, 2021** for grant administration for the Orestimba Creek Recharge and Recovery Project (OCRRP) Proposition 1 Storm Water Grant award. The progress report outline is as follows:

- Work Performed
- Budget Status
- Schedule Status

## 1 Work Performed

A summary table of work performed on the project during the current reporting period is provided in **Table 1** below.

**Table 1: Summary of Work Performed**

Tasks per Scope of Work	Work Completed During the Reporting Period	Work Scheduled for Next Period and Anticipated Issues to be Addressed
<b>Task 1 – Project Management</b>	<ul style="list-style-type: none"> <li>• Project set up and support</li> <li>• Internal coordination</li> <li>• Coordination with CCID and Provost &amp; Pritchard on supplemental documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Various project management tasks</li> <li>• Continued internal coordination</li> <li>• Continued coordination with CCID, DPWD, and Provost &amp; Pritchard</li> </ul>
<b>Task 2 – Coordinate Preparation of Supplemental Documentation</b>	<ul style="list-style-type: none"> <li>• Compiling information for supplemental attachments</li> <li>• Assisting CCID staff in drafting and review of Project Assessment and Evaluation Plan (Attachment 17)</li> <li>• Review of project monitoring plan</li> </ul>	<ul style="list-style-type: none"> <li>• Finalize and submit required supplemental documentation to SWRCB via FFAST within 60 days of Notice of Award (anticipated prior to April 16<sup>th</sup>)</li> </ul>
<b>Task 3 – Kickoff Conference Call</b>	<ul style="list-style-type: none"> <li>• Task to be initiated following execution of grant agreement with SWRCB</li> </ul>	<ul style="list-style-type: none"> <li>• Task to be initiated following execution of grant agreement with SWRCB</li> </ul>
<b>Task 4 – Prepare Reporting Templates</b>	<ul style="list-style-type: none"> <li>• Task to be initiated following execution of grant agreement with SWRCB</li> </ul>	<ul style="list-style-type: none"> <li>• Task to be initiated following execution of grant agreement with SWRCB</li> </ul>

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 March 2021 Progress Report

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Tasks per Scope of Work	Work Completed During the Reporting Period	Work Scheduled for Next Period and Anticipated Issues to be Addressed
<b>Task 5 – Prepare Quarterly Progress Reports and Reimbursement Requests</b>	<ul style="list-style-type: none"> <li>Task to be initiated following execution of grant agreement with SWRCB</li> </ul>	<ul style="list-style-type: none"> <li>Task to be initiated following execution of grant agreement with SWRCB</li> </ul>
<b>Task 6 – Prepare Final Project Report and Reimbursement Requests</b>	<ul style="list-style-type: none"> <li>Task to be initiated following completion of project construction</li> </ul>	<ul style="list-style-type: none"> <li>Task to be initiated following completion of project construction</li> </ul>
<b>Task 7 – Coordination with SWRCB</b>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Meeting with SWRCB Project Manager scheduled for April 12<sup>th</sup> to introduce staff and their roles, discuss status of supplemental documentation, and discuss milestones between submittal of application and signing of the grant agreement.</li> </ul>





## 2 Budget Status

The project has expended 6% of the overall budget to date (\$4,439 of \$69,000) to date. The status of the project budget is summarized in **Table 2** below.

**Table 2: Budget Status**

Description	Contract Fee	Spent Previously	Spent This Period	Total Spent to Date	Percent Contract Spent to Date	Contract Remaining
Task 1 – Project Management	\$25,900	\$0	\$3,221	\$3,221	12%	\$22,679
Task 2 – Coordinate Preparation of Supplemental Documentation	\$2,400	\$0	\$1,218	\$1,218	51%	\$1,182
Task 3 – Kickoff Conference Call	\$1,900	\$0	\$0	\$0	0%	\$1,900
Task 4 – Prepare Reporting Templates	\$900	\$0	\$0	\$0	0%	\$900
Task 5 – Prepare Quarterly Progress Reports and Reimbursement Requests	\$18,600	\$0	\$0	\$0	0%	\$18,600
Task 6 – Prepare Final Project Report and Reimbursement Request	\$4,400	\$0	\$0	\$0	0%	\$4,440
Task 7 – Coordination with SWRCB	\$14,900	\$0	\$0	\$0	0%	\$14,440
<b>PROJECT TOTAL</b>	<b>\$69,000</b>	<b>\$0</b>	<b>\$4,439</b>	<b>\$4,439</b>	<b>6%</b>	<b>\$64,561</b>

## 3 Schedule Status

At present, all tasks are on schedule. Task 2 – Coordinate Preparation of Supplemental Documentation deliverables are due to SWRCB no later than 60 days following notice of grant award. Notification of Award was sent by SWRCB to Central California Irrigation District on February 16, 2021. It is estimated that required supplemental documentation is due to SWRCB on later than April 16, 2021.

## 4 Outstanding Items

Not applicable.



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# PROGRESS REPORT

Del Puerto Canyon Reservoir Program Management

**Subject:** February 2021 Progress Report

**Prepared for:** Anthea Hansen (DPWD) and Chris White (SJRECWA)

**Prepared by:** Andy Neal and Katie Cole (Woodard & Curran)

**Date:** April 2, 2021

**Project No.:** 0011297.00

This progress report summarizes the work performed by Woodard & Curran and subconsultants for the period through February 26<sup>th</sup>, 2020 for Del Puerto Canyon Reservoir Program Management. Please contact [aneal@woodardcurran.com](mailto:aneal@woodardcurran.com) or (925) 627-4114 with any questions.

## Work Performed

A summary of work performed during the current reporting period is summarized in the following table.

Task Description	Work Completed This Period
<p><b>Task 1</b> Program Management</p>	<ul style="list-style-type: none"> <li>• Weekly internal team and external client coordination meetings.</li> <li>• Project management tool maintenance (EVA, document management portal, staff management and tracking, sub billing calendar).</li> <li>• Budget, schedule, and scoping tracking and updates.</li> <li>• Coordination with and management of subcontractors.</li> <li>• SJRECWA and DPWD Board Meeting update memos.</li> <li>• Developing and reviewing program budget and work plan for FY 2021 activities.</li> </ul>
<p><b>Task 2</b> Agency Coordination and Permitting Plan</p>	<ul style="list-style-type: none"> <li>• USBR weekly meetings and preparation.</li> <li>• Internal meetings and staff coordination related to permitting and agency coordination efforts.</li> <li>• Initiated work on the Eagle Permit.</li> </ul>
<p><b>Task 3</b> Reservoir Operations Analysis</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>

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Task Description	Work Completed This Period
<p><b>Task 5</b> CEQA/NEPA Project Phase Authorization</p>	<ul style="list-style-type: none"> <li>• Internal staff coordination and meetings.</li> <li>• Our team conducted a preliminary field survey of potential and former Golden Eagle nesting locations. They took a general look at nest locations and assessed the extent of wildfire damage in the project vicinity. A more detailed investigation will be performed as the nesting season gets further underway. This work is being performed to clear the site for geotechnical and other activities that will need to be started later this year.</li> <li>• Coordinating with Reclamation to initiate preparation of Biological Assessment (BA) for federally listed species.</li> </ul>
<p><b>Task 6</b> Validate Facilities</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
<p><b>Task 7</b> Procure Design Consultants</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
<p><b>Task 9</b> Conveyance Facilities Preliminary Design</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
<p><b>Task 10</b> USBR Feasibility Report</p>	<ul style="list-style-type: none"> <li>• None. Sponsors received a letter that the Secretary of the Interior did make a December 31, 2020 determination of feasibility pursuant to the WIIN Act, section 4007(b), P.L. 114-322 for the project. Our project was deemed technically and financially feasible and provides Federal benefit to meet the CVPIA incremental Level 4 refuge water supplies.</li> </ul>
<p><b>Task 11</b> Land-Owner Coordination</p>	<ul style="list-style-type: none"> <li>• Arranged site access for eagle survey.</li> </ul>
<p><b>Task 12</b> Survey/Mapping</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
<p><b>Task 13</b> Utility Company Coordination</p>	<ul style="list-style-type: none"> <li>• Coordinated with PG&amp;E team (Derrick Hallum, PM on status of the DPCR project on February 9th. Informed the PG&amp;E team of the work that Barnard performed on alignment alternatives and pricing. Planning for a workshop to review the Barnard alternative and discuss initial reactions and concerns. PG&amp;E, WAPA (Joe Oloriz), Barnard Construction, and Black &amp; Veatch will all be in attendance to talk through the work done by the Barnard/B&amp;V team.</li> </ul>
<p><b>Task 14</b> Outreach Support</p>	<ul style="list-style-type: none"> <li>• None.</li> </ul>

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## Budget Status

As of this invoice, 94% of the project budget has been billed (\$7,588,993.94 of \$8,046,300). A budget breakdown by task is included in the below table.

**TABLE 1: BUDGET BREAKDOWN BY TASK**

Task No.	Description	Budget	Previously Billed	Billed This Period	Total Billed to Date	Budget Remaining	% Billed to Date
1	Program Management	\$593,047.88	\$538,856.12	\$9,906.50	\$548,762.62	\$44,285.26	93%
2	Agency Coordination and Permitting Plan	\$461,400.50	\$404,649.03	\$12,025.60	\$416,674.63	\$44,725.87	90%
3	Reservoir Operations Analysis	\$433,833.50	\$368,833.50	\$0.00	\$368,833.50	\$65,000.00	85%
4	Funding Strategy (Not Included)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0%
5	CEQA/NEPA Compliance	\$1,936,583.00	\$1,862,763.45	\$2,818.80	\$1,865,582.25	\$71,000.75	96%
6	Validate Facilities	\$2,155,442.87	\$2,155,442.84	\$0.00	\$2,155,442.84	\$0.03	100%
7	Procure Design Consultants	\$156,493.25	\$5,493.25	\$0.00	\$5,493.25	\$151,000.00	4%
8	Design Consultant Management (Not included)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0%
9	Conveyance Facilities Preliminary Design	\$1,082,697.00	\$1,082,317.94	\$0.00	\$1,082,317.94	\$379.06	100%
10	USBR Feasibility Study	\$639,000.00	\$564,515.89	\$7,262.75	\$571,778.64	\$67,221.36	89%
11	Land Owner Coordination	\$40,336.00	\$39,955.80	\$0.00	\$39,955.80	\$380.20	99%
12	Survey/Mapping	\$174,000.00	\$173,364.88	\$0.00	\$173,364.88	\$635.12	100%
13	Utility Company Coordination	\$58,466.00	\$53,303.25	\$2,268.00	\$55,571.25	\$2,894.75	95%
14	Outreach Coordination	\$315,000.00	\$304,678.71	\$537.63	\$305,216.34	\$9,783.66	97%
<b>Total</b>		<b>\$8,046,300.00</b>	<b>\$7,554,174.66</b>	<b>\$34,819.28</b>	<b>\$7,588,993.94</b>	<b>\$457,306.06</b>	<b>94%</b>

Notes:

<sup>1</sup> Task budgets are internally allocated and may be reallocated between tasks based on program need.

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## Schedule Status

The Feasibility Report was accepted by the Secretary of Interior and submitted to congress with the determination of feasibility pursuant to the WIIN Act, section 4007(b). We have recently developed a cost loaded schedule for the program for FY 2021 and subsequent years.

## Outstanding Issues

### Bureau of Reclamation Coordination

- The Program is awaiting concurrence on feasibility of the project from Reclamation. Most other project elements are on hold until this determination is made.
- To support the EIS development being led by Reclamation, the Program team was asked to develop additional technical memos related to Air Quality and Climate Change, Energy Use, Biological Resources, and Transportation and Traffic Impacts. The team was given a very short turnaround time in order to keep compliance with Reclamations overall EIS schedule. The draft EIS was scheduled to be published in October 2020, with a Record of Decision slated for April 2021, but that schedule is slipping on the Reclamation side. An updated Alternatives Memo was provided to Reclamation in January 2021.

### Army Corps Coordination

- The Corps is officially a cooperating agency for the USBR NEPA process. As such, they will be working with Reclamation to develop a cooperating agency agreement limiting their involvement in the EIS process to those areas within their statutory authority. They have designated Reclamation to act on their behalf in the Section 7 consultation. We have a Preliminary Jurisdictional Determination from the Corps, but they have suggested to Reclamation that we may need to complete an Approved Jurisdictional Determination. Reclamation is requesting clarification.

### State Water Resources Control Board Coordination

- After the initial water rights application was reviewed by the State Board, additional coordination and analyses were required for the water availability analysis portion of the application. This has required more detailed data collection and analyses to estimate downstream impacts of flow reduction in the Del Puerto Creek. The State Board does not have streamlined guidelines for the requirements of the water availability analyses, and it is unknown what level of detail will be required for completion of the application at this time. The team has developed a strategy for the water availability analysis and drafted a TM which will be presented to the State Board for further discussion before re-submitting the application.

### Utility Company Coordination

- The Shell Oil asset transaction delayed work on pipeline relocation. Coordination will be required with the new owners, Crimson Pipeline, as the project advances.
- Ongoing coordination with PG&E has exceeded the expected amount due to infrastructure conflicts in the area of the DPCR site. Our team has coordinated with PG&E on an initial routing study and with three potential re-routing options to assess as feasible possibilities in the advancement of the overall project. W&C civil engineers need to develop access roads layouts and costs to include in the Program cost estimate. DPWD hired Barnard and Black & Veatch, who provided a review of PG&E's transmission line relocation concepts for the Program team. Our team also coordinated with them weekly and has been providing materials for their review.

XI. B.



Department of Energy  
Western Area Power Administration  
Sierra Nevada Region  
114 Parkshore Drive  
Folsom, CA 95630-4710

Sent via E-Mail

Amendment 1 to  
Contract 19-SNR-02260

Ms. Anthea G. Hansen  
General Manager  
Del Puerto Water District  
17840 Ward Avenue  
Patterson, CA 95363

Dear Ms. Hansen:

Western Area Power Administration (WAPA) and Del Puerto Water District (DPWD) executed Non-Disclosure Agreement 19-SNR-02260 (Agreement). This Agreement became effective July 15, 2019, and terminates on July 15, 2021. The parties wish to extend the term of the Agreement to December 31, 2022. Therefore, Section I.1 of the Agreement is now deleted in its entirety and replaced with a new Section I.1 as shown below:

**I. EFFECTIVE DATE; DURATION; TERMINATION**

1. This Agreement shall be effective as of July 15, 2019, and will remain in effect through December 31, 2022, unless amended, in writing, by mutual agreement of the Parties. Notwithstanding the above, the provisions concerning non-disclosure of Confidential Information received under this Agreement shall survive the expiration of the term of this Agreement for three (3) years.

This Amendment 1 to the Agreement (Amendment) shall become effective upon execution by DPWD and shall remain in effect concurrently with the Agreement. Except as expressly modified by this Amendment, the Agreement shall remain in full force and effect and shall be subject to all the provisions of the Agreement, except as herein amended.

Execution by Counterparts: This Amendment may be executed in any number of counterparts and, upon execution and delivery by each Party, the executed and delivered counterparts together shall have the same force and effect as an original instrument as if all Parties had signed the same instrument. Any signature page of this Amendment may be detached by any counterpart of this Amendment without impairing the legal effect of any signatures thereon and may be attached to another counterpart of this Amendment identical in form hereto, by having attached to it one or more signature pages.

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Electronic Signatures: The Parties agree that this Amendment may be executed by handwritten signature or digitally signed using Adobe Sign or Adobe E-Signature. An electronic or digital signature is the same as a handwritten signature and shall be considered valid and acceptable.

If you agree with the terms and conditions of this Amendment, please sign, date, have the signature attested, and return a copy to Mr. Joshua Blake at [jblake@wapa.gov](mailto:jblake@wapa.gov). If you have contractual questions regarding these arrangements, please contact Ms. Roberta Ruoizzi at [ruozzi@wapa.gov](mailto:ruozzi@wapa.gov).

Sincerely,

SONJA ANDERSON Digitally signed by SONJA ANDERSON  
Date: 2021.04.07  
13:56:49 -07'00'

Sonja A. Anderson  
Senior Vice President and  
Sierra Nevada Regional Manager

Concurrence:

DEL PUERTO WATER DISTRICT

By: Anthea G. Hansen

(Attest)  
By: Anthea G. Hansen  
Name: Anthea G. Hansen  
Title: General Manager  
Address: 17840 Ward Avenue / PO Box 1596  
Patterson, CA 95363  
Title: Secretary  
Date: 4/7/21



XI.B.

## DRAFT MEETING SUMMARY

# Alternative T-Line Relocation Corridor for the Del Puerto Canyon Reservoir Project

DATE: April 1, 2021

TIME: 1PM-2.30PM

LOCATION: Virtual

PROJECT NAME: Del Puerto Canyon Reservoir (DPCR)

MEETING CALL-IN INFORMATION (PHONE): Dial: 925-627-4110  
Passcode: 6567340#

### Attendees

Name	Organization	Role
Anthea Hansen	DPWD	Project Sponsor
Mike Matson	Woodard & Curran	Facilities Lead
Andy Neal	Woodard & Curran	Program Manager
Xavier Irias	Woodard & Curran	Technical Support
Katie Cole	Woodard & Curran	Water Resources Planner
Jeff Serocki	Barnard	T-Line Construction
Rick Hollenbaugh	Barnard	Project Manager
Derrick Hallum	PG&E	Project Manager
Mingsien Lin	PG&E	T-Line Engineer
Gage Fleming	PG&E	Real Property/Land Manager
Joseph Oloriz	WAPA	Project Manager (STPL)
Jeffrey Miller	WAPA	T-Line Engineer (STPL)
Randy Franks	Black & Veatch	Project Manager
Jingang Li	Stantec	T-Line Engineering
Pavlo Voloshyn	Stantec	T-Line Engineering
Vivian Cho	Stantec	T-Line Engineering
Tony Pagan	Stantec	Project Manager

### Purpose:

- Bring forward for PG&E consideration a potentially cost-effective T-Line relocation corridor alternative.
- Review basis for alternative corridor and address initial PG&E questions.
- Agree on next steps in PG&E route selection process.

### Summary of Discussion

1. Introductions.

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## Meeting Summary

### Alternative T-Line Relocation Corridor for the Del Puerto Canyon Reservoir Project



2. Reviewed the 3 alignment alternatives developed by PG&E in April 2020: Western, Central, and Eastern.
3. Reviewed Program considerations of PG&E routing study and basis for undertaking development of another route alternative:
  - a. Identify ways to reduce overall environmental impact footprint around DPCR area.
  - b. Identify shorter alignment with reduced right of way needs.
  - c. Identify modifications to reduce costs (reduced length, fewer structures, and risk-based budgeting contingencies).
  - d. Accommodate reasonable WAPA SLTP realignment.
  - e. Avoid conflicts with City of Patterson annexed lands east of California Aqueduct.
  - f. Avoid conflicts with TID 115kV T-Line, Interstate 5, and California Aqueduct.
4. Presented Modified Central alignment:
  - a. Alignment developed from PG&E Central Alternative and uses PG&E criteria for T-Line construction and O&M:
    - i. Considered wind pressure on conductors with reservoir and dam in place.
    - ii. Assumed same/similar conductors as currently used for the five T-line circuits.
    - iii. Assumed "standard" lattice structures for towers but full analysis needs to be done, including foundation analysis.
  - b. This alternative results in fewer T-line structures and length by "sharing" airspace over the dam to accommodate T-line spans.
  - c. Cost estimate is \$98M plus 30% contingency (\$128M upper bound).
5. Considerations for future discussions on Modified Central alignment:
  - a. PG&E has a limit of 45-degree deflection for conductor change of horizontal direction.
  - b. Easements: will PG&E and WAPA easements overlap?
  - c. Construction coordination between T-Line construction and dam embankment construction needs to be worked out.
  - d. Need for better understanding about superiority of rights for access and maintenance.
  - e. WAPA estimates it will cost \$20M if their project is moved from its current timeline.
6. Reviewed high level schedule:
  - a. Generally, durations appear adequate but there are critical steps/activities missing.
    - i. PG&E has an internal process before beginning 30% design to get funds approved to support design contracts with consultants and internal staff time.
    - ii. *ACTION ITEM: W&C and PG&E to jointly update schedule to accurately capture work activities, sequential logic, and durations.*
7. Next steps:
  - a. PG&E does not need to bring all 4 alignments up to 30%; consensus is that a high-level screening can be used to reduce the options to 1 or 2 corridors.
    - i. *ACTION ITEM: PG&E to convene internally and discuss Modified Central Alternative and high-level screening of four alternatives.*
    - ii. *ACTION ITEM: W&C to meet with Program Team to identify specific concerns about the PG&E alignment options.*
    - iii. *ACTION ITEM: W&C to schedule a follow-up workshop to identify the 1 or 2 alignment corridors that should advance to 30% design.*
  - b. *PG&E's Proponent's Environmental Assessment (PEA) would be initiated after 30% design is complete.*
  - c. *ACTION ITEM: DPWD and PG&E to verify current funding agreement is adequate for next PG&E scope of work. The funding amount will be adjusted as warranted by the scope.*

**Meeting Summary**

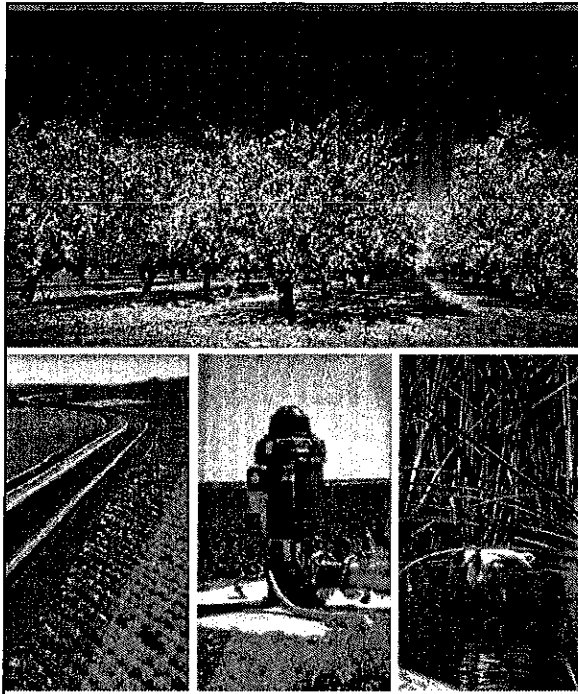
**Alternative T-Line Relocation Corridor for the Del Puerto Canyon Reservoir Project**

- d. *ACTION ITEM: DPWD will set up a monthly or bi-monthly coordination call with PG&E and WAPA. Standing agenda will include progress reporting and coordination, issue identification and resolution.*



**Summary of Action Items**

<b>Action Item</b>	<b>Person Responsible</b>	<b>Due Date</b>
W&C and PG&E to jointly update schedule to accurately capture elements, linkages, and durations	Mike M. & Derrick	April 16
PG&E to convene internally and discuss 4 alignment options to determine how they could be ranked. Provide DPCR Program with written comments.	Derrick	April 16
W&C to meet with Barnard and Black & Veatch to identify specific concerns about the 4 alignment options. Provide PG&E with written comments.	Mike M.	April 16
W&C to schedule a follow-up discussion with PG&E to identify the 1 or 2 alternative corridors that would advance to 30% design.	Mike M.	April 22
DPWD and PG&E to verify current funding agreement is adequate for next steps	Anthea & Gage	April 22
W&C to set up regular coordination call with PG&E and WAPA	Mike M.	April 16






PG&E T-Line Relocation Corridor Alternatives  
Workshop April 1, 2021

# DEL PUERTO CANYON RESERVOIR

Water for the Economy  
Water for the Environment  
Storage for the Future




1

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## Purpose:

- Bring forward a potentially cost-effective T-Line relocation corridor alternative – Modified Central Alternative
- Review basis for alternative and address initial PG&E questions
- Make commitments on next steps for PG&E route alternatives evaluation and 30% alternatives development



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6/19 1

## Agenda

- Introductions 5 minutes
- Status Update 5 minutes
- Review PG&E Alternatives (April 2020) 15 minutes
  - West, Central, East corridors
  - Range of Cost
- Present Modified Central Corridor Alternative 30 minutes
  - Criteria
  - Layout/Structures/Clearances
  - Range of Cost
- Discussion 20 minutes
- Next Steps 10 minutes
- Summary 5 minutes



3

3

## Status – How we got here

- Program Kick Off February 2019
- Environmental Field Studies 3/2019 – 5/2020
- Initiate Consultation with PG&E July 2019
- Publish DEIR December 2019
- Certify FEIR October 2020
- USBR Initiate DEIS Preparation April 2020
- PG&E Completes Alternatives Study April 2020
- Program Develops T-Line Corridor Alt. May 2020
- USBR/Interior Determination of Feasibility December 2020



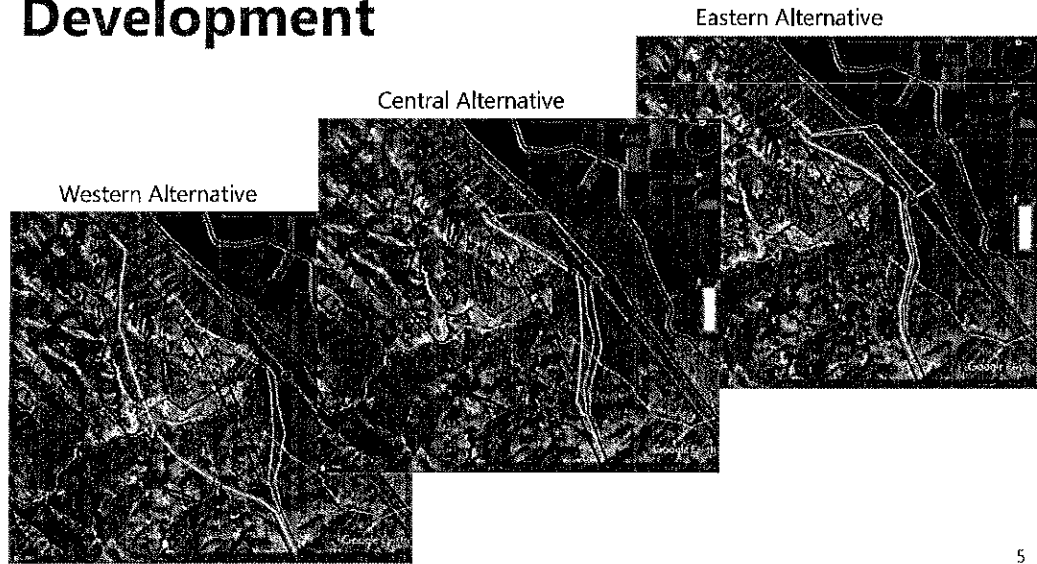
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# April 2020 PG&E Alternatives Development



## DPCR Program Consideration of PG&E Routing Feasibility Study

- Identify ways to reduce environmental impact footprint around DPCR
- Identify potential shorter alignments and reduced right-of-way needs
- Identify modifications to lower costs (reduced length, fewer structures and risk-based budgeting contingencies)
  - Central Alternative \$152 million plus 100% Contingency
- Accommodate reasonable WAPA SLTP realignment
- Avoid conflicts with TID, I5 and CA crossings
- Avoid land use issues with City of Patterson (annexed lands east of CA)

Del Puerto Canyon Reservoir

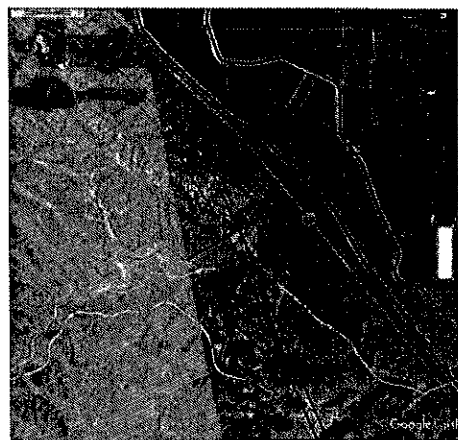


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## Modified Central T-Line Corridor Alternative

- Developed from PG&E Central Alternative
- Used PG&E criteria for T-Line construction and O&M
- Reduces T-Line structures, length
- Reduces Program environmental impacts
- Estimate \$98 million plus 30% Contingency (\$128 million upper bound)



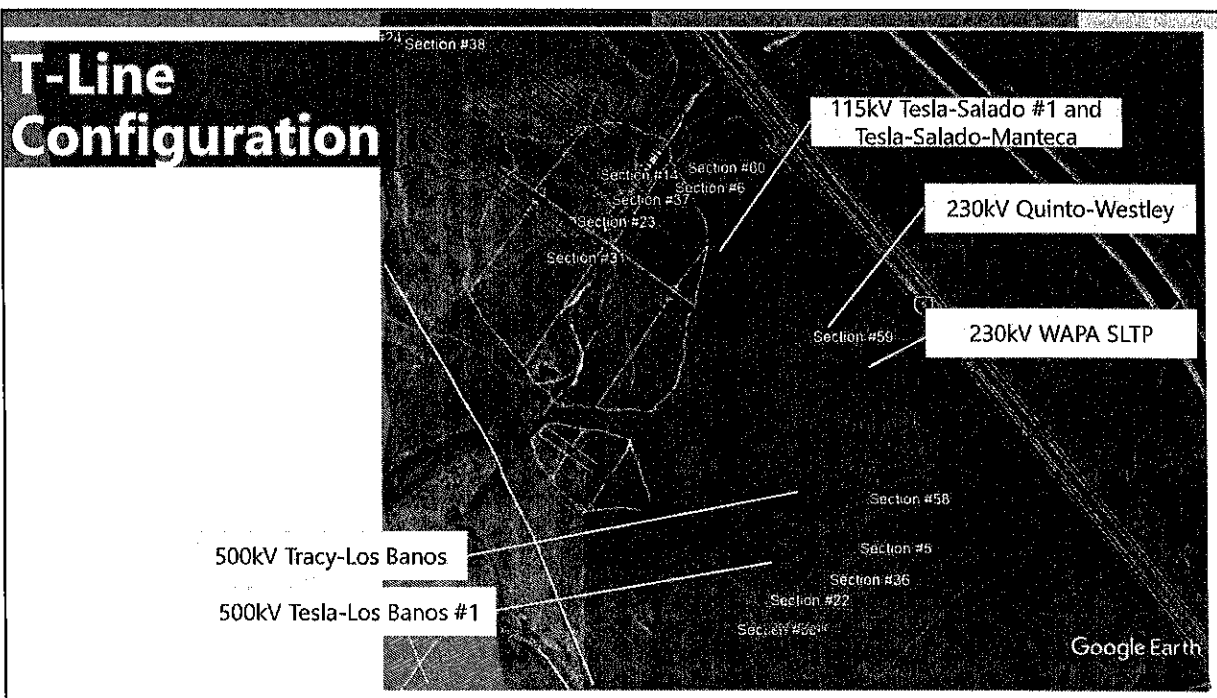
Das Puerto Canyon Reservoir



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## T-Line Configuration



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## Next Steps

- DPWD and PG&E continue funding agreement for next scope of work
- PG&E provide scope/work plan and schedule for 30% design development
- PG&E develops selected alternatives to 30%, then selects best alternative for further development
  - Environmental Field Studies
  - Geotechnical Investigations
  - WAPA, TID and Crimson coordination
  - Constructability Review
- PG&E and Program/WAPA continue collaboration and coordination – Alternatives decision by May to launch 30% studies
- Other

Del Puerto Canyon Reservoir



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## Summary

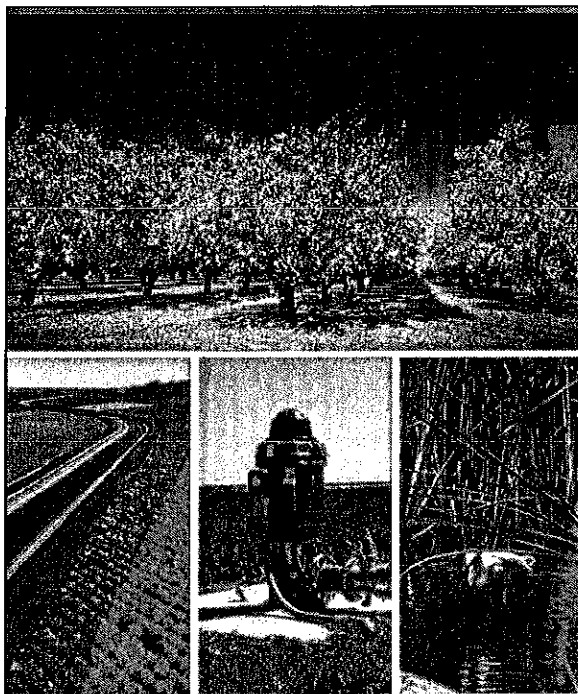
- Commitments
- Action items
- Regular follow up and coordination meetings

Del Puerto Canyon Reservoir





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PG&E T-Line Relocation Corridor Alternatives  
Workshop April 1, 2021




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# DEL PUERTO CANYON RESERVOIR

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Water for the Economy  
Water for the Environment  
Storage for the Future



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225 7

XI.B.

Anthea Hansen

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**From:** Hallum, Derrick <D1Hh@pge.com>  
**Sent:** Thursday, April 15, 2021 3:01 PM  
**To:** Mike Matson; Anthea Hansen  
**Cc:** Johnson, Tom; Fleming, Gage; Lin, Minghsien; Pagán, Tony; Henson, Aaron; Li, Jingang; Voloshyn, Pavlo; Cho, Vivian; Leung, Francis  
**Subject:** PG&E response to route alternative designed by B&V and estimated by Barnard Construction  
**Attachments:** supporting sketch.pdf

Classification: Internal

Mike and Anthea,

Here is PG&E's response. Let me know if you have any further thoughts or questions. (I will let you forward to whom you deem necessary on your teams)

**DPWD Team,**

Thanks for providing a fourth alternative of routes for the relocation of PG&E lines. The PG&E internal and consulting teams have reviewed the route alternative designed and estimated by Black & Veatch and Barnard construction. While it is our common goal to drive a successful project by minimizing the amount of line relocation necessary to lower costs and reduce schedule impacts, PG&E is ultimately constrained by scoping or placing our assets in a future location that doesn't limit our ability to maintain and fully operate our assets without increasing risks or liabilities. In basic summary, PG&E does not believe this route analysis is a feasible alternative to pursue based upon the following comments:

- 1.) Towers were mentioned to be non standard to PG&E design. Based upon the current complexity of the project, we do not believe it is prudent to begin alternatives with a non-standard approach. (This usually requires considerable more design time to evaluate and approve non standard approaches to design.)
- 2.) Route separations seem to imply that land rights are reduced and design blow outs between 230kv lines may not be met. This could have the following adverse impacts: (a) land rights cannot be modified to less than their original width without an 851 review and approval by the CPUC, which will take approximately 6-12 months and doesn't guarantee an approval of modification. Design blowouts between the 230kv lines for WAPA and PG&E seem to be to close with only 80ft centerline to centerline separation. (The existing land rights are 35' from centerline and are outdated and likely need to be updated with greater widths, depending on design spans.) (supporting sketch)
- 3.) PG&E does not want to construct, maintain, or operate transmission lines over the Dam for the following reasons:
  - a. Induction on 500kv lines is very high and will create a number of potential issues beyond what we believe we can anticipate for the Dam. Anything crossing under the lines that is made of metal needs to be grounded to protect the general public from the induction. It is one of the major reasons why our easements are exclusive and have a "no structure" clause in them. (safety is our primary concern here)
  - b. Potential conflicts with future maintenance (both for the Dam and the transmission lines).
  - c. Accessibility (tower locations are placed at peak of hills and along the adjacent hillside that have around a 40% slope)
  - d. Construction sequencing between the line relocation and the Dam construction implies a greater safety and complexity concern, which usually always results in schedule or cost impacts unforeseen.
  - e. Conflict of who has superior rights between Dam owner/operator and PG&E line easement crossings. PG&E needs to keep superior rights for full enjoyment of our lines.

- f. As mentioned previously, the Dam structure in PG&E easements will require CPUC approval through the 851 review process and is likely to get held up longer based upon the criticality of 500kv lines.
- 4.) Two rightmost 230 kV transmission lines (PG&E and WAPA) have supporting structures on the very steep slope so their constructability should be confirmed (please see sketch attached)
- 5.) Four 500 kV structures (number 48-49 and 36-37 on B&V kmz presentation) have line angle +/- 53° that exceeds the capacity of the standard towers used on this line (should be ≤ 45°)

As a point of clarity, we feel it is better to approach scoping with PG&E as part of the process upfront, since a natural part of scoping process with the primary stakeholder filters the scope through the perspective/lens of our interests necessary for our assets. It is plausible to scope and provide design for us to review, but it creates difficulty to provide comments that are definitive without details necessary for us to know whether it will ultimately meet our needs as owner/operator.

Respectfully, the PG&E Team.

*Derrick Stallum, PMP*

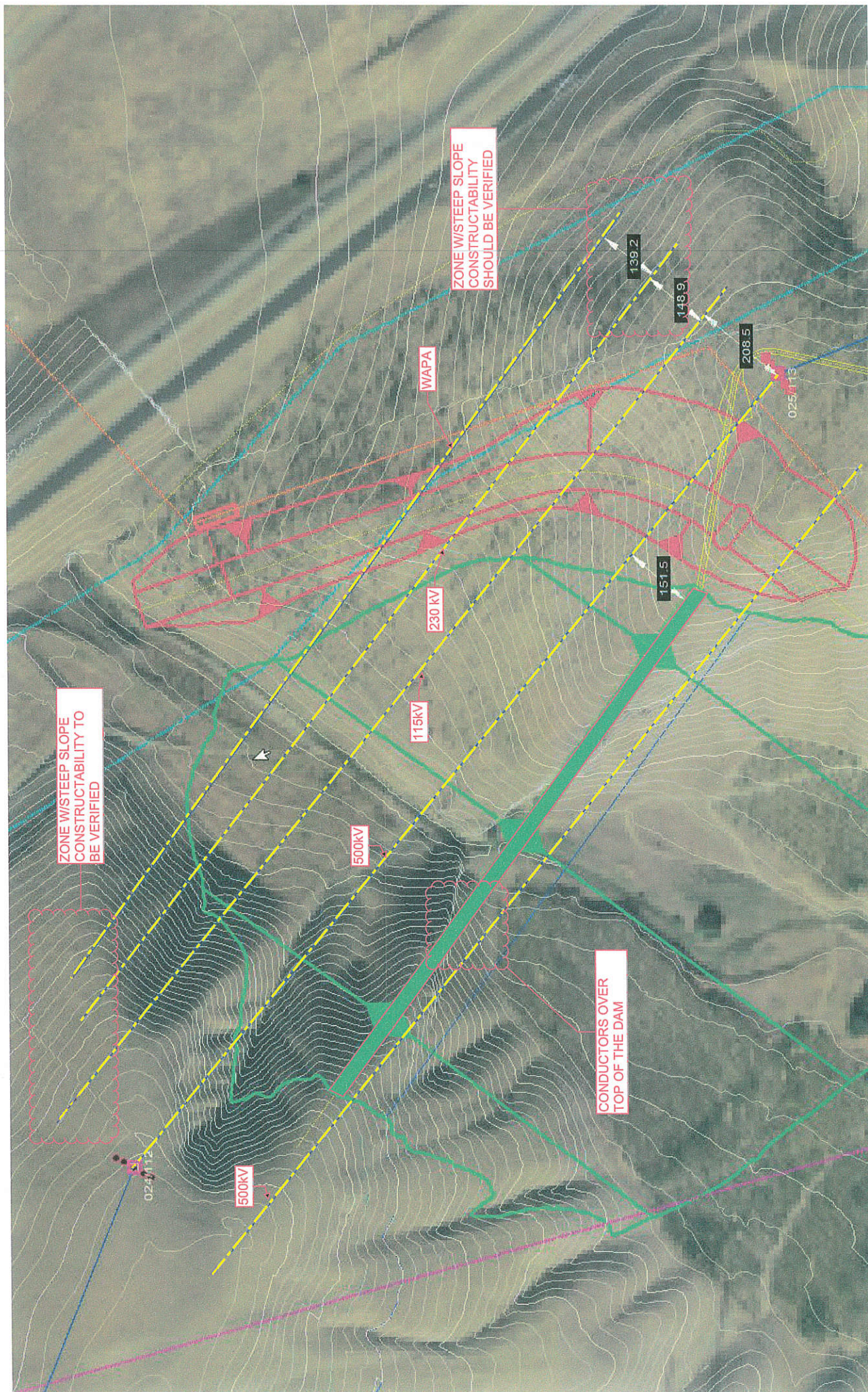
Sr. Consulting Project Manager

Electric Transmission

Office – 559-263-5061 Cell 559-862-5674







ZONE W/STEEP SLOPE  
CONSTRUCTIBILITY TO  
BE VERIFIED

ZONE W/STEEP SLOPE  
CONSTRUCTIBILITY  
SHOULD BE VERIFIED

CONDUCTORS OVER  
TOP OF THE DAM

WAPA

230 KV

115KV

500KV

500KV

139.2

448.9

208.5

151.5

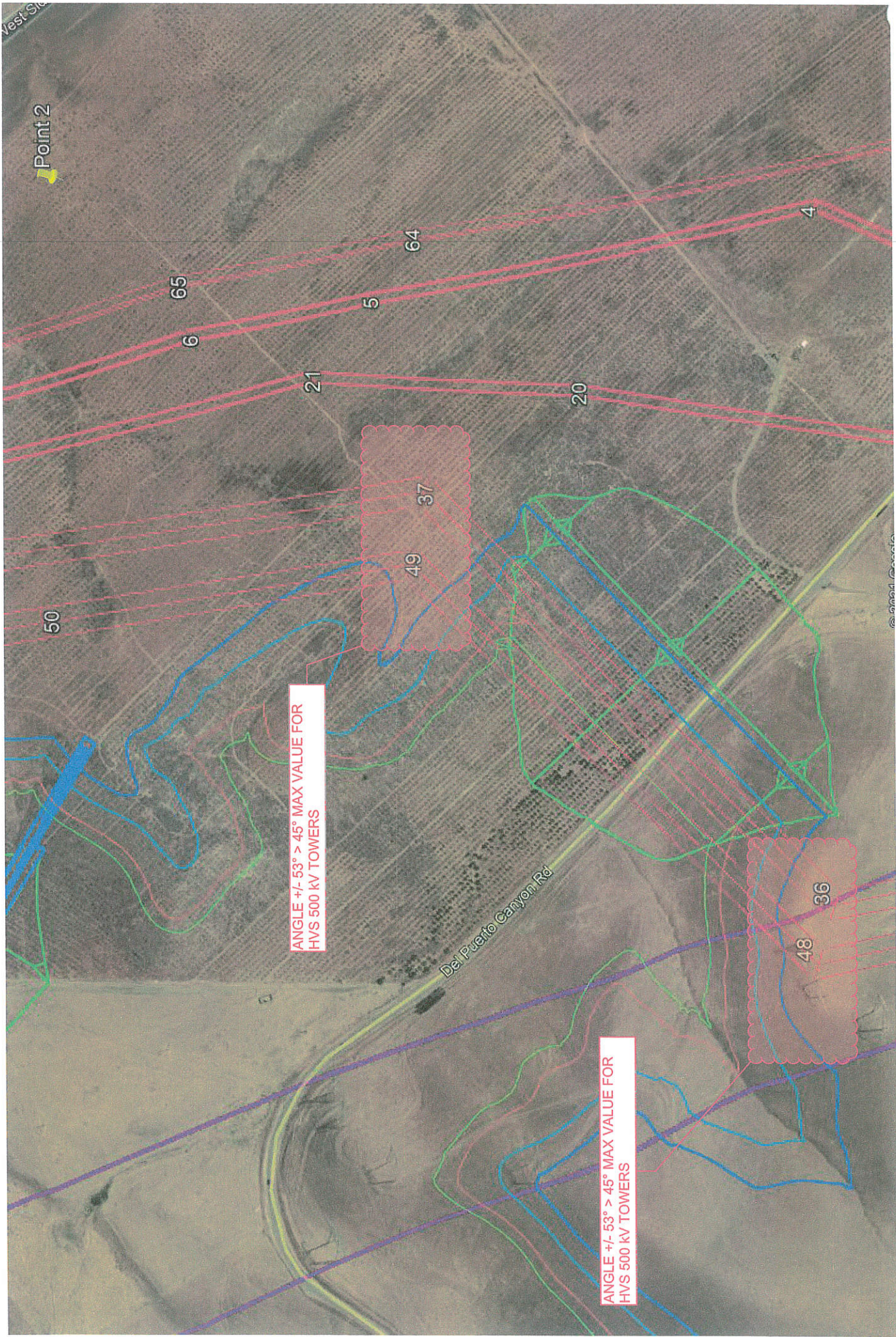
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## MONTHLY REPORT

### FUNDING

Thank you to the Local Agency Partners (LAPs) for their assistance in the Washington DC virtual meetings held March 1 - 12. We are anticipating that several members of Congress will sign on to a funding support letter prepared by Congressman Mike Thompson. The total Federal funding request includes the remainder of the authorized full federal share of 25 percent of the total project cost (approximately \$211 million). The support letter encourages the Department of Interior to include a significant portion of this funding in the FY2022 WIIN Act work plan.

The following chart provides an overview of the Multi-party Agreement (MPA) expenditures through February 28, 2021. The in-kind services, funds received, and cash on hand are shown through March 17, 2021. The third MPA invoice was sent to the LAPs earlier this month and is reflected in the outstanding receivables.

MARCH 29, 2021

### UPCOMING ACTIVITIES

March 30 – Joint Meeting with Legal & Finance Workgroups

April 13 & 20 – Technical Review Board meetings (50% Dam Design)

April 26 – Design Workshop (50% Dam Design and Cost Estimate)

April 29 – Cost Allocation Workshop

### UPCOMING LAP BOARD COORDINATION

April 5 – Valley Water Storage Committee

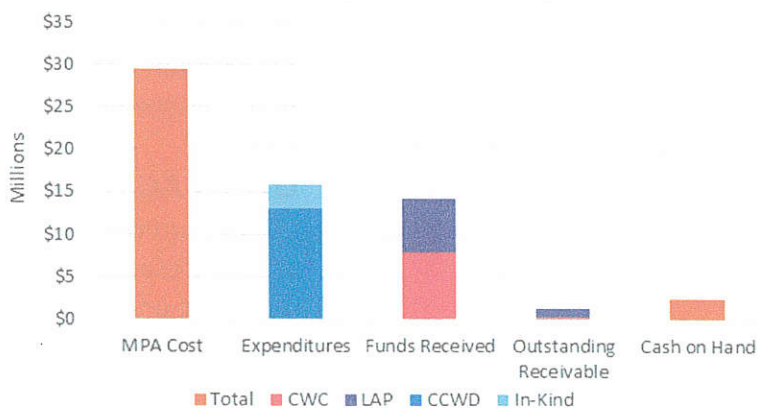
### ADDITIONAL PROJECT INFO

<https://www.ccwater.com/lvstudies>

<https://www.usbr.gov/mp/vaqueros/>

<https://cwc.ca.gov/Water-Storage/WSIP-Project-Review-Portal/All-Projects/Los-Vaqueros-Reservoir-Expansion-Project>

Multi-Party Agreement Summary To Date



### JPA FORMATION

The Legal Work Group met on March 25<sup>th</sup> to continue to work on refining the terms of the JPA Agreement. The target date for completion of the JPA Agreement is Spring 2021. CCWD has scheduled Board approval of the JPA Agreement on April 7. The first JPA Board meeting will be held within 60 days of JPA formation.

### CCWD AND EBMUD USAGE FEES

Version 5.0 of the proforma financial model was released February 20<sup>th</sup>. Partners provided comments on the model and Clean Energy Capital and CCWD are developing written responses.

A Cost Allocation Workshop was scheduled on April 29 for the Finance Workgroup and other interested LAP staff.

CCWD executed the letter of intent (LOI) on March 19 and transmitted to the LAPs for signature. LAP execution of the LOI is requested prior to, or concurrent with, LAP execution of the JPA Agreement. Several LAPs have completed execution of the LOI.

### **PERMITTING**

Reclamation has initiated consultation with the State Historic Preservation Officer as required under Section 106 of the National Historic Preservation Act. Reclamation has also completed the final review of the terrestrial Biological Assessment (BA) and has started review of the aquatic BA. California Department of Fish and Wildlife (CDFW) is continuing its review of a pre-formal draft of the Incidental Take Permit application. The CDFW Lake and Streambed Alteration Agreement application package is under development. U.S. Army Corps of Engineers (USACE) and Central Valley Regional Water Quality Control Board (CVRWQCB) have begun permit package reviews. The Draft Wetland Mitigation Plan and Restoration and Revegetation Plan, required by the USACE and CVRWQCB, is being developed. CCWD is continuing discussions with the State Water Resources Control Board in preparation for modifications to CCWD's Los Vaqueros water rights as needed for future Phase 2 LVE operations.

### **OTHER AGREEMENTS**

CCWD continues to coordinate with the California Department of Water Resources (DWR) and Reclamation. On March 12<sup>th</sup> a modeling and operations workshop was held with CCWD, DWR, and Reclamation. A draft operations plan is being developed and may serve as the foundation for the coordinated operations agreement(s).

On March 18 EBMUD and CCWD executed the Backstop MOU for the potential provision of alternative conveyance through EBMUD facilities when the reservoir will be unavailable during dam construction.

### **DESIGN**

The District held meetings with DWR staff to continue coordination on the Turn-in to the California Aqueduct at Bethany Reservoir, which will include preparation of a Pump-In Proposal to identify water quality implications and long-term water quality monitoring for the facility. Coordination with regional agencies

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progressed, including meetings with Contra Costa Transportation Authority to consider adjustments to the Transfer-Bethany Pipeline and planned highway alignments to avoid conflicts. A meeting was held with East Bay Regional Park District and East Contra Costa County Habitat Conservancy to review the pipeline alignment evaluation.

A draft Pumping Plant No. 1 (PP1) Replacement preliminary design report is currently under review, which summarizes key design criteria, decisions, facility layout, construction approach, schedule, and construction cost estimate update. A meeting was held with adjacent landowners to discuss options for disposal of groundwater during construction. Reclamation continues to review the draft assistance agreement for final design funding.

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XI. D.

# B.F. Sisk Dam Raise and Reservoir Expansion Project Feasibility Study

April 16, 2021

CDM  
Smith







# Presentation Overview

- Feasibility Report & EIR/SEIS Status Update
- Feasibility Report Addendum Update
- Coordination with Caltrans
- Project Schedule



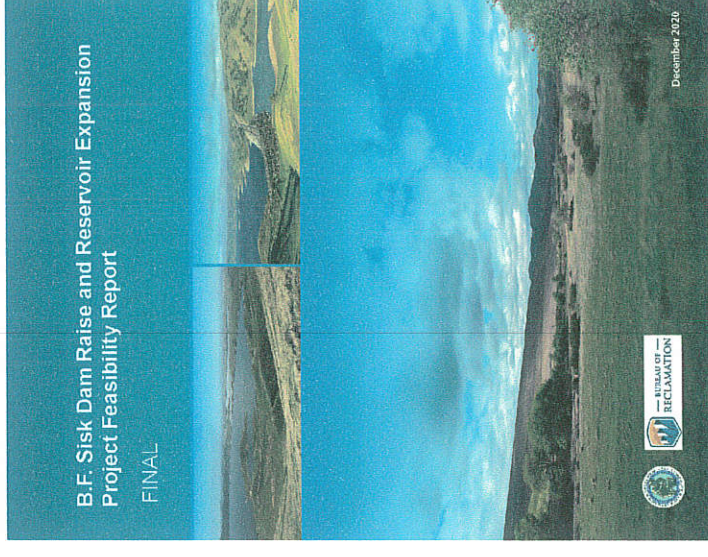
# Feasibility Report & EIR/SEIS Update





# Feasibility Report & EIR/SEIS Update

- Final reviews of the Feasibility Report were completed in December by Reclamation, the Department of Interior, and the Office of Management and Budget (OMB)
- The Feasibility Report was submitted to Congress on December 30<sup>th</sup>
- Review feedback received from OMB called for an Addendum to the Feasibility Report to resolve areas of remaining uncertainty
- Feasibility Report Addendum scheduled for completion Fall 2021

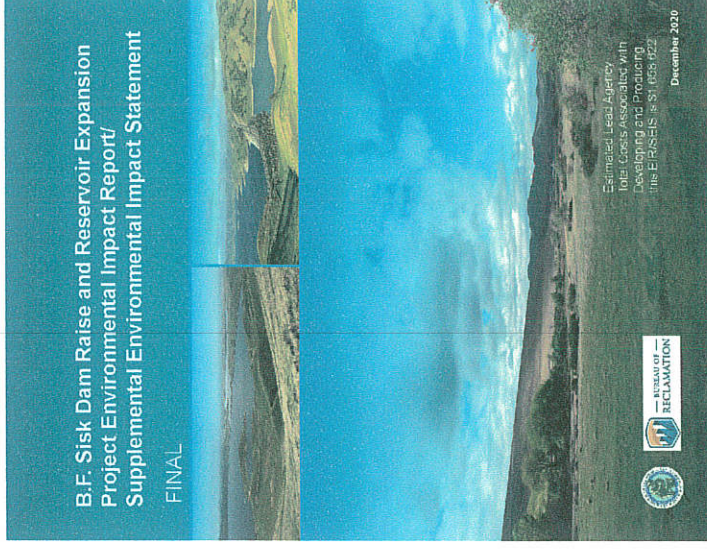






# Feasibility Report & EIR/SEIS Update

- Comments received on the Draft EIR/SEIS focused on potential water supply effects and coordination with the BF Sisk Safety of Dams Modification Project
- Final EIR/SEIS released on December 18, 2020
- Development of the Notice of Determination and Record of Decision expected following completion of required ESA consultation work and other permitting in the Fall 2021



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# Feasibility Report Addendum Update



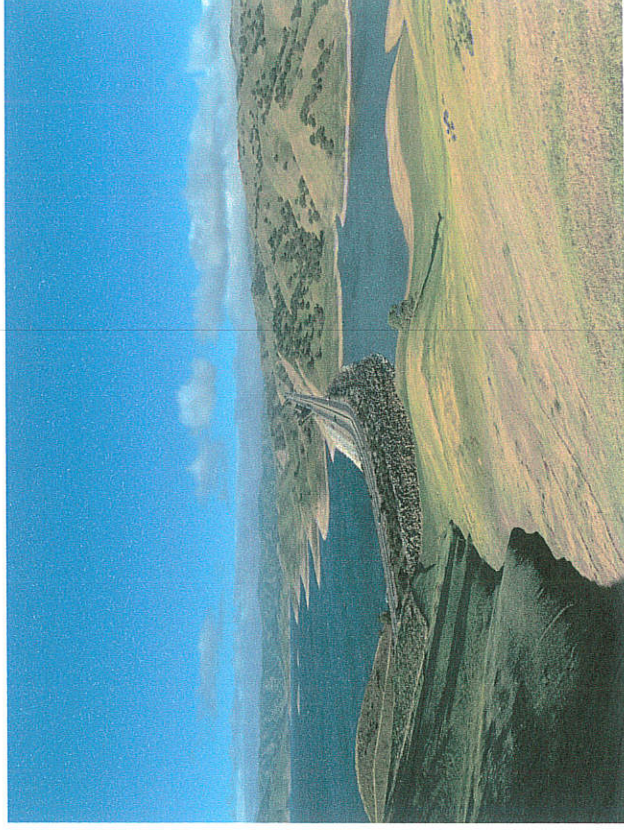
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# Feasibility Report Addendum – Transportation

## Benefits

- Modifications to State Route 152 necessary with increased reservoir storage levels
- Existing embankment does not meet seismic design criteria given active fault that it crosses
- Caltrans is requiring design of modified embankment to include upgrades to meet criteria



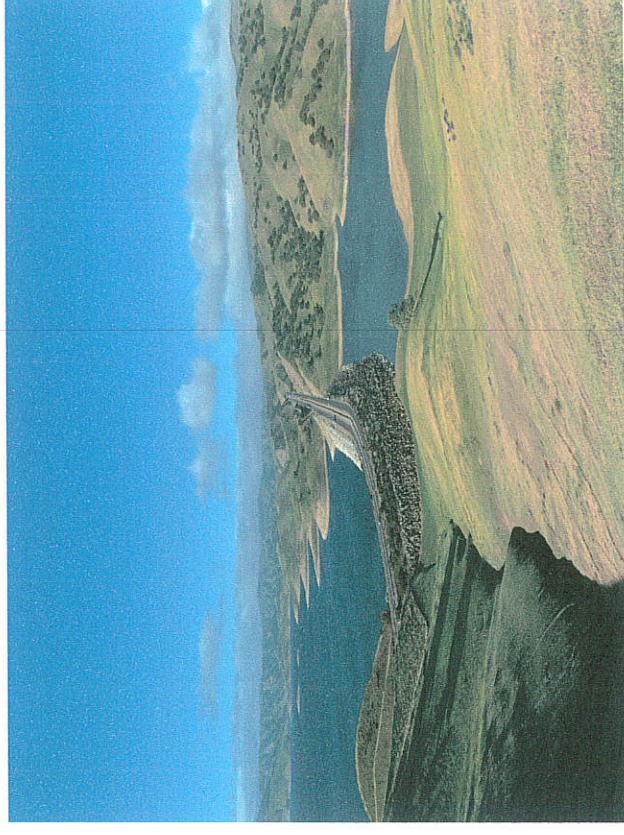




# Feasibility Report Addendum – Transportation Benefits

- Improvements in transportation safety generated by the project estimated using two evaluation approaches –
  - value of lost time, and a
  - least-cost most likely alternative approach
- OMB Review identified the need

for a more detailed of evaluation of transportation benefits to report a single benefit estimate in the Addendum





# Feasibility Report Addendum – Transportation Benefits

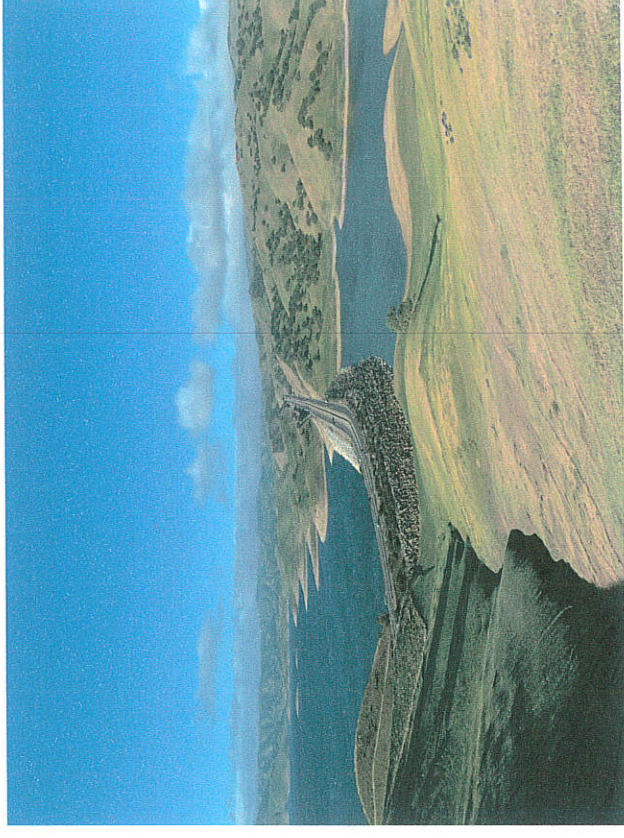
Evaluation Approach	Public Safety Benefit (million \$)	Public Safety Annual Benefits (million \$)
Value of Lost Time Approach	\$9.1	\$0.3
Least Cost Most Likely Alternative	\$256.0	\$7.54





# Feasibility Report Addendum – Transportation Benefits

- New analysis under development for the Addendum is –
  - Refining the trip delay evaluation completed for the Feasibility Report with additional modeling of trip origin, traffic loading and likely detour routing
  - New evaluation of potential economic impacts from limits on evacuation routing following a seismic failure





# Feasibility Report Addendum – Cost Estimate Updates

- The cost estimates utilized in the 2020 Feasibility Report were developed by Reclamation’s TSC in 2015.
- These 2015 estimates were escalated by the TSC to January 2020 price levels
- Reclamation standards limit cost estimate escalations to no more than 5 years

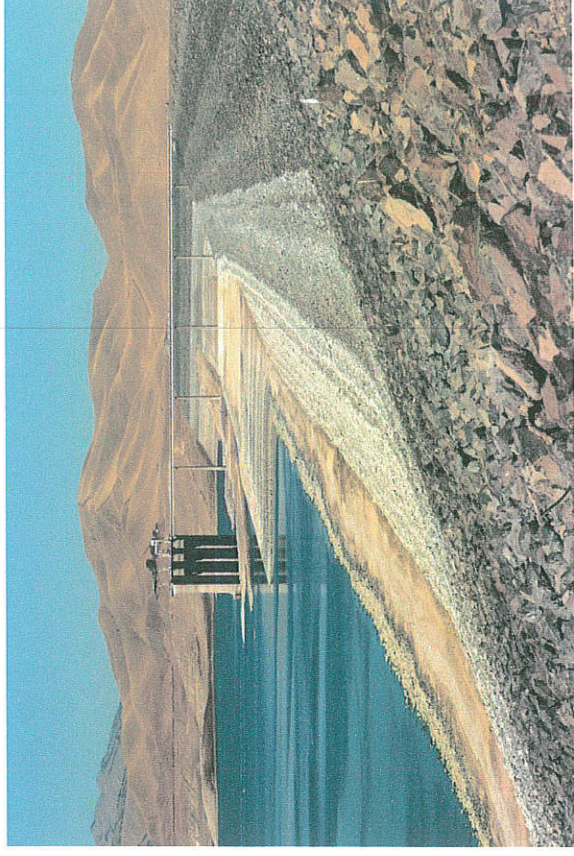






# Feasibility Report Addendum – Cost Estimate Updates

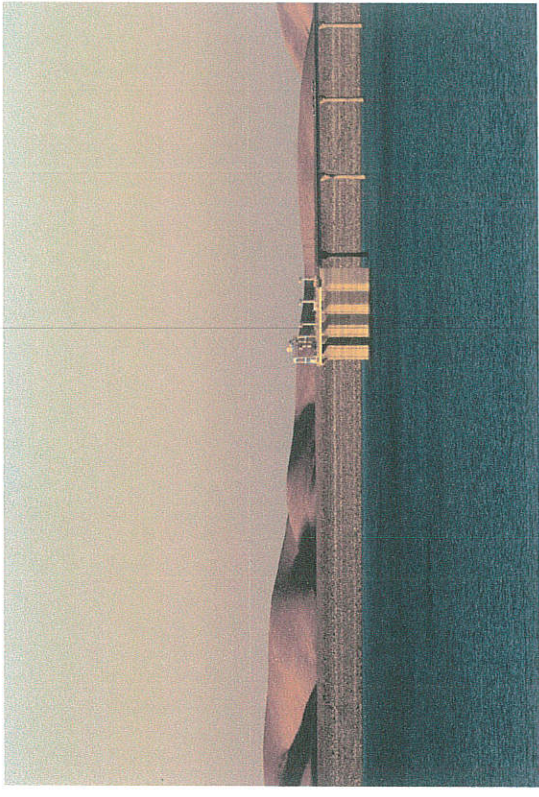
- The 2015 costs estimates are being revised to update unit cost prices to 2021 levels
- The cost estimates developed in 2020 for the SR 152 modification will be escalated to the same 2021 pricing level for evaluation in the Feasibility Report Addendum





# Feasibility Report Addendum – Operational Configuration Selection

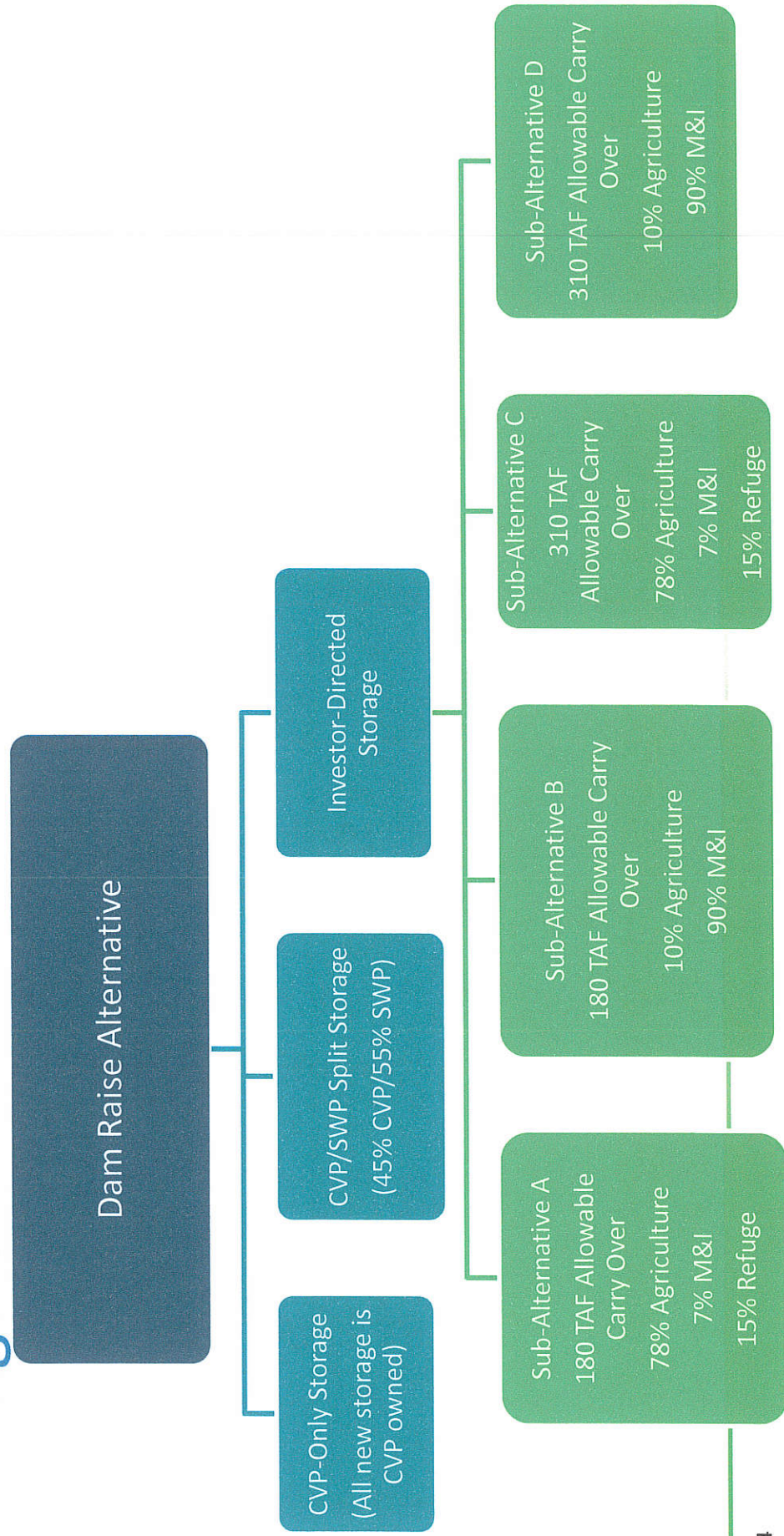
- The Feasibility Report and EIR/SEIS evaluated multiple operational configurations (subalternatives) of the Dam Raise Alternative
- The different operational subalternatives were formulated as bookends to capture the range of potential stakeholder requested operational configurations that could ultimately be implemented







# Feasibility Report Addendum – Operational Configuration Selection



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# Feasibility Report Addendum – Operational Configuration Selection

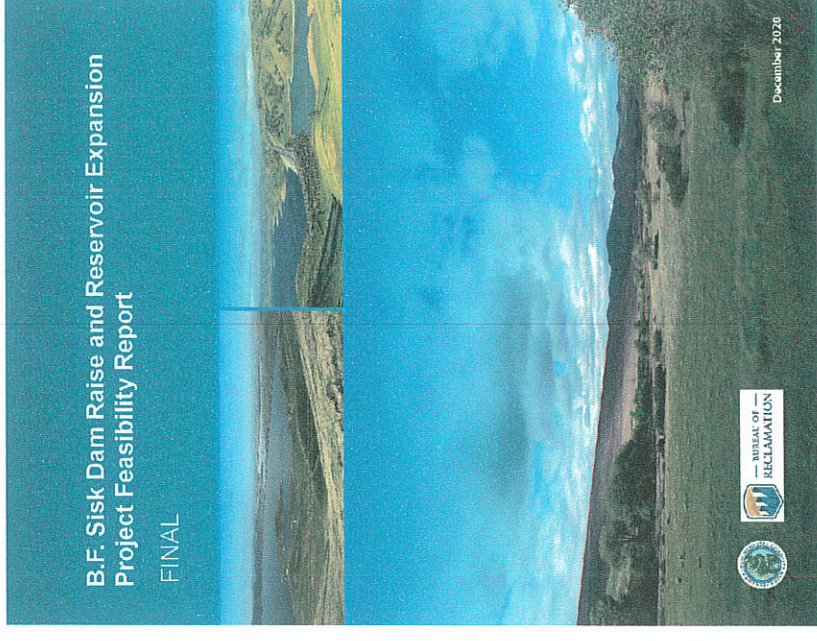
- The subalternatives vary in their assignment of the new storage capacity to different water users and in how water stored in this new space in the reservoir can be carried over
- The Feasibility Report Addendum will need to present the subalternative selected for implementation





# Feasibility Report Addendum – Operational Configuration Selection

- The Feasibility Report evaluated economic benefits driven by the subalternative’s improvement in:
  - Increased availability of water supply for use during emergencies
  - Municipal and industrial water supply deliveries
  - Agricultural water supply deliveries
  - Improvements in transportation safety benefits with upgrades to State Route 152 (two evaluation methods presented Avoided Trip Delay and Least Cost Most Likely Alt.)



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# Operational Configuration Selection (Irrigation Water Supply TAF)

Year Type	Dam Raise Alternative					
	CVP-Only	CVP/SWP Split	Investor-Directed - A	Investor-Directed - B	Investor-Directed - C	Investor-Directed - D
Wet	77.55	24.03	63.06	14.45	25.71	9.62
Above Normal	22.08	15.02	17.66	2.98	7.28	1.62
Below Normal	38.27	18.76	30.68	4.87	9.76	2.34
Dry	4.89	7.86	2.86	-3.27	11.27	-2.27
Critical	1.68	7.99	0.89	-1.79	7.52	-0.94
Average	34.58	15.62	27.65	4.65	14.46	2.93

*2/19*





# Operational Configuration Selection (M&I Water Supply)

Year Type	Dam Raise Alternative					
	CVP-Only	CVP/SWP Split	Investor-Directed - A	Investor-Directed - B	Investor-Directed - C	Investor-Directed - D
Wet	4.54	1.30	7.46	68.21	3.39	23.78
Above Normal	-0.53	4.55	-0.96	25.07	-3.04	1.11
Below Normal	4.61	-21.09	4.35	34.57	2.45	14.40
Dry	4.20	-18.16	3.50	19.07	4.11	25.73
Critical	-0.92	26.33	-1.47	5.84	-0.70	14.53
Average	2.87	-2.27	3.43	35.74	1.82	18.05

*JSC*





# Operational Configuration Selection (Emergency Water Supply)

Alternative Plans	Emergency Supply (TAF)
CVP-Only	28
CVP/SWP Split	17
Investor-Directed - A	31
Investor-Directed - B	31
Investor-Directed - C	63
Investor-Directed - D	63





# Operational Configuration Selection (Refuge Water Supply)

Year Type	Dam Raise Alternative					
	CVP-Only	CVP/SWP Split	Investor-Directed A	Investor-Directed B	Investor-Directed C	Investor-Directed D
Wet	-	-	13.1	-	4.4	-
Above Normal	-	-	4	-	1.5	-
Below Normal	-	-	6.6	-	2	-
Dry	-	-	1.8	-	3.7	-
Critical	-	-	0.7	-	2.3	-
Average	-	-	6	-	3	-

*ESC*





# Operational Configuration Selection (Economic Feasibility)

	CVP Only Storage	CVP/SWP Split Storage	Investor-Directed A	Investor-Directed B	Investor-Directed C	Investor-Directed D
Ag, M&I & Refuge WS	\$8.9	\$2.6	\$9.3	\$16.9	\$5.2	\$9.9
Emergency WS	\$12.5	\$4.4	\$14.7	\$14.7	\$27.8	\$27.8
Transp. Safety– Opt. 1	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Transp. Safety– Opt. 2	\$7.6	\$7.6	\$7.6	\$7.6	\$7.6	\$7.6
<b>Total Annual Benefits</b>	<b>\$21.7/ \$29.4</b>	<b>\$7.3/ \$14.7</b>	<b>\$24.3/ \$32.0</b>	<b>\$31.9/ \$39.9</b>	<b>\$33.3/ \$40.8</b>	<b>\$38.0/ \$45.7</b>

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# Operational Configuration Selection (Economic Feasibility)

- The Feasibility Report compares those benefits to cost estimates developed at a feasibility level for the Dam Raise and State Route 152 construction along with other non-field costs

Project Component	Most Probable Cost (millions)
Dam Raise	\$492.0
SR - 152	\$383.0
Non-Field Costs	\$47.1
Total	\$922.1

hsc



# Operational Configuration Selection (Economic Feasibility)

	CVP Only Storage	CVP/SWP Split Storage	Investor-Directed A	Investor-Directed B	Investor-Directed C	Investor-Directed D
Total Annual Benefits	\$21.7/ \$29.0	\$7.3/ \$14.6	\$24.3/ \$31.6	\$31.9/ \$39.2	\$33.3/ \$40.6	\$38.0/ \$45.3
Total Annual Costs – Most Probable	\$31.7	\$31.9	\$32.5	\$32.0	\$30.7	\$30.7
Net Benefits or Costs	-\$10.0/ -\$2.7	-\$24.6/ -\$17.3	-\$8.2/ -\$0.9	-\$0.1/ \$7.2	\$2.6/ \$9.9	\$7.3/ \$14.6
Benefit-Cost Ratio	0.7/0.9	0.2/0.5	0.7/1.0	1.0/1.2	1.1/1.3	1.2/1.5

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# Coordination with Caltrans



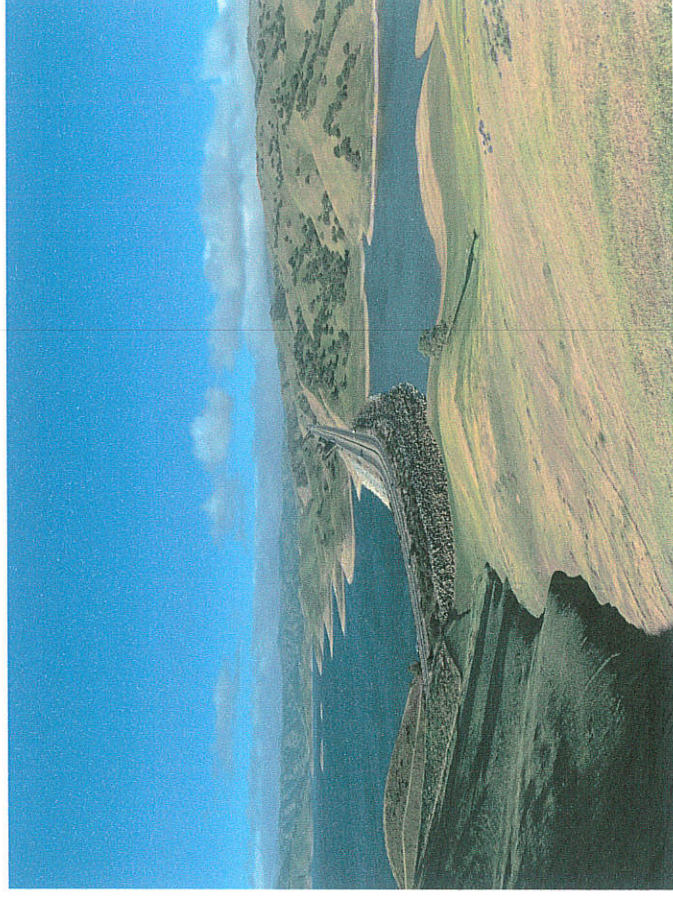
254





# Coordination with Caltrans

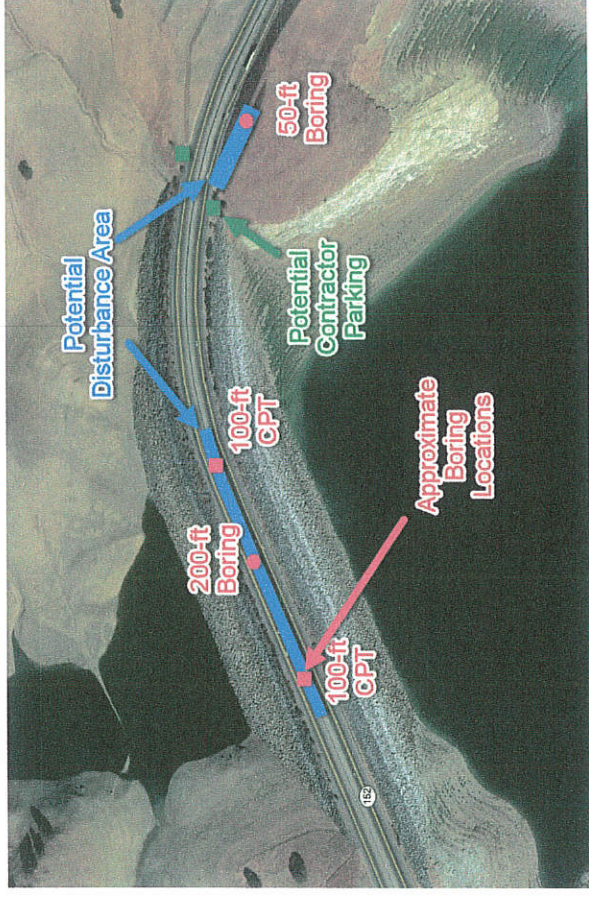
- The feasibility level design developed for modifications to the SR 152 crossing at Cottonwood Bay relied on limited as built construction details
- Conservative assumptions were developed specific to embankment strength that drove configuration of the proposed modifications





# Coordination with Caltrans

- As an initial step in the refinement of the feasibility level designs, a geotechnical evaluation is being planned for 2021 to reduce uncertainty with the proposed modifications
- Four borings are proposed to collect core samples for lab testing
- Drilling activities are tentatively planned for completion in May/June 2021
- Drilling activities are tentatively planned for completion in May/June 2021



Note: CPT – cone penetration test

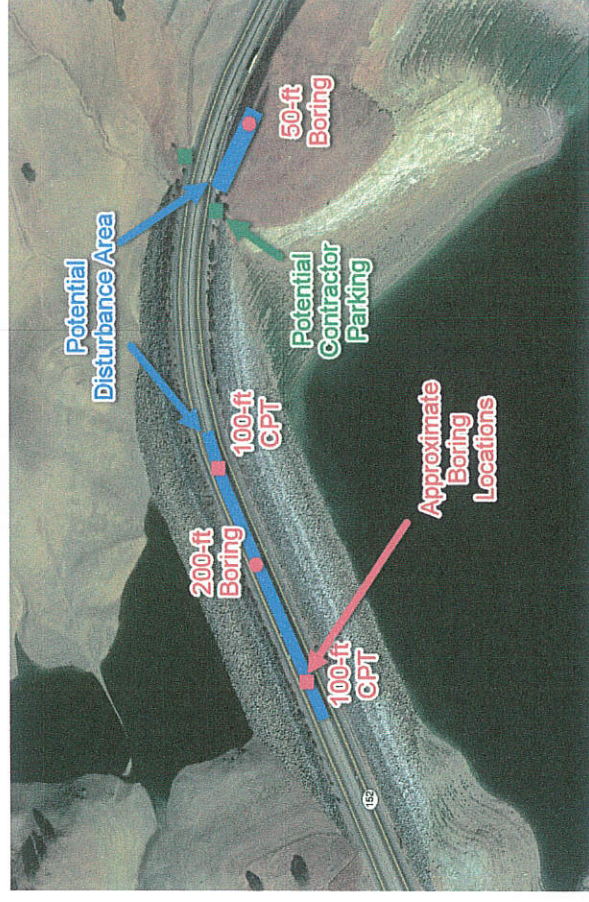
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# Coordination with Caltrans

- Work underway by SLDMWA and Reclamation on permitting specific to Geotech drilling
  - Caltrans Encroachment Permit
  - CEQA/NEPA
  - ESA
  - NHPA



Note: CPT – cone penetration test



# Project Schedule



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## Project Schedule

- Continue refinement and discussions on operational alternative (Spring 2021)
- ESA/CESA Consultation (2021)
- Notice of Determination/Record of Decision (Summer/Fall 2021)
- Project Permitting (2021)
- Initiate Design Activities (2021-2022)
- Design and Pre-construction Activities (2022-2024)
- Project Construction (2025-2032)



