AGENDA
ENGINEERING and OPERATIONS COMMITTEE
Thursday, November 4, 2021, at 9:00 am
Boardroom, 1701 North Lombard Street, Oxnard CA 93030

Call to Order – Open Session
Committee Members roll call

1. **Public Comment (**Proposed Time: 5 minutes)
   The public may comment on any matter not on the agenda within the jurisdiction of the Committee. All comments are subject to a five-minute time limit.

2. **Approval of Minutes** (Proposed Time: 5 minutes)
   Motion The Committee will review and consider approving the Minutes from the October 7, 2021 Engineering and Operations Committee meeting.

3. **November 10, 2021 Board Meeting Motion Agenda Items**
   The Committee will review and discuss the following agenda items to be considered for approval at the November 10, 2021 Board meeting. The Committee will formulate a recommendation to the entire Board based on the discussions with staff. sThe Committee will discuss the following items:

   3.1 Resolution 2021-22 Approving the California Environmental Quality Act Notice of Exemption Determination for the Lake Piru Sediment Sampling Project
   (Environmental Services Department, Tessa Lenz) (Proposed Time: 5 minutes)
   The committee will consider recommending approval of Resolution 2021-22, adopting the California Environmental Quality Act (CEQA) Notice of Exemption (NOE) determination for the Lake Piru Sediment Sampling Project (Project) and authorizing staff to file a NOE for the Project with the Ventura County Clerk and Recorder's Office, to the full Board.

   3.2 Resolution 2021-23 Approving the California Environmental Quality Act Notice of Exemption Determination for the El Rio Water Well No. 19 Project (Engineering Department, Craig Morgan) (Proposed Time: 5 minutes)
   The committee will consider recommending approval of Resolution 2021-23, adopting the California Environmental Quality Act (CEQA) Notice of Exemption (NOE) determination for the El Rio Water Well No. 19 (Project) and authorizing staff to file a NOE for the project with the Ventura County Clerk and Recorder's Office, to the full Board.

   3.3 Execution of a Contract Amendment with Cramer Fish Sciences for the Fish Passage Pre-Implementation Studies under FERC Project (Environmental Services Department, Evan Lashly) (Proposed Time: 20 minutes)
   The Committee will consider recommending approval of the motion item, authorizing the General Manager to execute a contract amendment with Cramer Fish Sciences to provide

fish passage pre-implementation studies in accordance with the FERC license for the Santa Felicia Project, to the full Board.

4. Project Highlights

4.1 Environmental Services Department Update (Environmental Services, Linda Purpus) (Proposed Time: 15 minutes)

4.2 Operations and Maintenance Department Monthly Update (Operations and Maintenance Department, Brian Collins) (Proposed Time: 15 minutes)

5. Future Agenda Topics

ADJOURNMENT

Directors:
Lynn Maulhardt, Chair
Edwin T. McFadden III
Daniel C. Naumann

Staff:
Mauricio E. Guardado Jr.
Anthony Emmert
John Carman
Michel Kadah
Adrian Quiroz
Randall McInvale
Hannah Garcia-Wickstrum
Dr. Maryam Bral
Brian Collins
Craig Morgan
Robert Richardson
Linda Purpus
Evan Lashly
Tessa Lenz

The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participation in, or denied the benefits of, the District's services, programs or activities because of any disability. If you need special assistance to participate in this meeting, please contact the District Office at (805) 525-4431. Notification of at least 48 hours prior to the meeting will enable the District to make appropriate arrangements.

Approved: _____
Mauricio E. Guardado, Jr., General Manager

_____
Dr. Maryam Bral, Chief Engineer

_____
Brian Collins, Chief Operations Officer

Posted: (date) November 1, 2021 (time) 9:00 a.m. (attest) ***Destiny Rubio***
At: United Water Conservation District Headquarters, 1701 Lombard Street, Oxnard CA 93030

Posted: (date) November 1, 2021 (time) 9:00 a.m. (attest) ***Destiny Rubio***
At: www.unitedwater.org

MINUTES
ENGINEERING AND OPERATIONS COMMITTEE MEETING
Thursday, October 7, 2021, 9:00 A.M.

COMMITTEE MEMBERS PRESENT:
Director Edwin T. McFadden III
Director Daniel C. Naumann
Chair Lynn E. Maulhardt

STAFF ATTENDING
Dr. Maryam Bral, chief engineer
Anthony Emmert, assistant general manager
Brian Collins, chief operations officer
Linda Purpus, environmental services manager
Josh Perez, human resources manager
Craig Morgan, engineering manager
Robert Richardson, senior engineer
Adrian Quiroz, associate engineer
Michel Kadah, engineer
Erik Zvirbulis, GIS analyst
Randall McInvale, environmental scientist regulatory affairs
Tessa Lenz, associate environmental scientist
Ambry Tibay, senior accountant
Daryl Smith, controller
Dan Detmer, water resources manager
Murray McEachron, principal hydrologist
Zachary Plummer, IT administrator

PUBLIC PRESENT
None

OPEN SESSION: 9:00 a.m.
Chair Maulhardt called the Engineering and Operations Committee Meeting to order at 9:00 a.m.

Committee Members Roll Call
Administrative Assistant Destiny Rubio commenced Roll Call. Committee members: Chair Maulhardt, Director Naumann and Director McFadden were present.

1. **Public Comment**
   Chair Maulhardt asked if there were any public comments for the Committee. None were offered.

2. Approval of Minutes

Motion to approve the Minutes from the September 2, 2021 Engineering and Operations Committee meeting, Director Naumann; Second, Director Maulhardt. Voice vote: three ayes (Naumann, Maulhardt, McFadden); none opposed; Motion carried, 3/0.

3. October 13, 2021 Board Meeting Motion Agenda Items

3.1 Authorize a Contract with GEI Consultants, Inc. to Develop the 60 percent Design Phase of the Santa Felicia Dam Outlet Works Improvement Project

Chief Engineer Maryam Bral addressed the committee and provided a slide presentation (see attached) regarding staff's request to recommend authorizing the General Manager to execute an agreement with GEI Consultants, Inc. in the amount of $1,715,706.00 to Develop the 60 percent Design Phase of the Santa Felicia Dam Outlet Works Improvement Project to the full Board.

Chair Maulhardt inquired about the project and if the existing outlet works will be abandoned in place. Dr. Bral stated that it is not possible to use the existing outlet works, the seismic deficiencies deem it unusable. Director McFadden asked for more detail on the abandonment of the outlet works. Dr. Bral stated that the plan is to abandon it in place and fill the penstock which will prevent dam safety issues. She added Engineering will gain a better understanding on how this will be done as they advance through the detailed design.

Assistant General Manager Anthony Emmert stated that staff has also considered interim risk reduction measures. Dr. Bral explained that in submitting a request to FERC for approval of the project schedule, FERC then posed the question of what would occur in the interim and requested plans for interim risk reduction measures (IRRMs) while the schedule is extended. Chair Maulhardt requested that staff inform the committee of future IRRMs discussions so that they have some visibility of the process. Dr. Bral thanked Chair Maulhardt for his comments and stated that Engineering will report back to the Committee with the IRRMs that are discussed with FERC.

Director Naumann inquired about the project timeline. Dr. Bral stated that Engineering has requested an extension from FERC to complete the design of the Outlet Works by December 2023, prepare for the bid process, and plan to begin construction in August 2024 for completion by 2026. She added that Spillway improvements will be lagging in parallel, the construction of the spillway would begin in 2026 and end in 2028.

Director Naumann then asked if this process includes the hydro plant. Dr. Bral stated that as part of the design process staff evaluated the size of hydropower units and presented options to the Board back in 2019. Staff also consulted with FERC. Director Naumann then requested that staff keep both the committee and Dennis Cardoza informed of these activities, for grant opportunities.

The committee members agreed to recommend approval of the motion item to the full Board.

3.2 Authorize a Contract with GEI Consultants, Inc. to Develop the 30 percent Design Phase of the Santa Felicia Dam Spillway Improvement Project

Dr. Bral addressed the committee and provided a slide presentation (see attached) regarding staff's request to recommend authorizing the General Manager to execute an agreement with GEI Consultants, Inc. in the amount of $579,948.00 to Develop the 30 percent Design Phase of the Santa Felicia Dam Spillway Improvement Project to the full Board. Director Naumann asked how much more the spillway capacity will be increased. Dr. Bral stated that the goal is to pass an inflow design flood of 220,000 cfs.

The committee members agreed to recommend approval of the motion item to the full Board.

3.3 <u>Resolution 2021-18</u> Adopting the California Environmental Quality Act (CEQA) Initial Study-Mitigated Negative Declaration (IS-MND) and approving Phase I of the Freeman Diversion Sediment Management Project and its Implementation

Environmental Services Department Manager Linda Purpus addressed the committee and provided a slide presentation (see attached) regarding staff's request to recommend adoption of the CEQA IS-MND for Phase I of the Freeman Diversion Sediment Management Project and approve Phase I of the Project, authorizing its implementation by the General Manager, and directing the Environmental Services Manager to file a Notice of Determination in accordance with CEQA for the Phase I of the Freeman Diversion Sediment Management Project to the full Board. Ms. Purpus then introduced Environmental Scientist Evan Lashly to provide details on the Project.

Mr. Lashly presented the findings of the CEQA analysis for the Project. He stated that the District is prioritizing Phase 1 of the project for implementation this fall and staff will return to the full Board regarding adoption of the CEQA findings for Phase 2 at a later date. Director McFadden asked about the timing for the second phase of the project. Mr. Lashly stated that it is dependent on the success of Phase 1 and should be expected within the next year or two.

The committee members agreed to recommend approval of the motion item to the full Board.

4. Project Highlights

4.1 Engineering Department Monthly Update

Dr. Bral provided updates and slides (see attached) on the Engineering department's monthly updates. She then introduced Chief Operations Officer Brian Collins to provide updates on the physical modeling progress.

Chair Maulhardt inquired about a block depicted in one of the photos, and Engineering Manager Craig Morgan stated that it was implemented as a cleaning mechanism. Director Maulhardt then inquired about a portion of the model and asked how staff plans to transport machinery there. Mr. Morgan stated that it will be developed in the design. Chair Maulhardt asked if the 40,000 cfs depicted in the photo reflects the sediment loading and rocks or boulders hitting the concrete. Mr. Collins stated that the sediment and cobble transport will

be evaluated in the physical model process and the damage not evident in the modeling will be evaluated in other ways such as computational fluid dynamics modeling. Director Naumann asked if a diversion was performed. Mr. Collins stated that there were administrative challenges with the drawings and the Bureau of Reclamation had not received the update in time to make the modifications. Director Naumann then asked about the University of Iowa's modeling progress. Mr. Collins stated that they have initiated construction of the 1:12 model.

4.2 Environmental Services Department Monthly Update

Ms. Purpus provided updates and slides (see attached) on the environmental services department's monthly updates and then introduced Randall McInvale to present the key highlights.

4.3 Operations and Maintenance Department Monthly Update

Mr. Collins provided updates and slides (see attached) on the operations and maintenance department's activities for the month. Chair Maulhardt inquired about the expected life of the microscreens. Mr. Collins stated that he does not have the answer at this time, but that they are in good shape and are better maintained now. Chair Maulhardt then inquired about the dollar amount of the chlorine scrubber replacement, to which Mr. Collins responded the cost to replace the chlorine scrubber is approximately $250,000 dollars.

5. Future Agenda Topics

No future agenda topics were offered.

ADJOURNMENT 10:44 a.m.

Chair Maulhardt adjourned the Engineering and Operations Committee meeting at 10:44 am.

I certify that the above is a true and correct copy of the minutes of the Engineering and Operations Committee Meeting of October 7, 2021.

ATTEST:_____

Lynn Maulhardt, Chair


Engineering And Operations Committee Meeting
October 7, 2021
Motion Item 3.1
Authorize a contract with GEI Consultants, Inc. to Develop the 60 percent Design Phase of the Santa Felicia Dam Outlet Works Improvement Project

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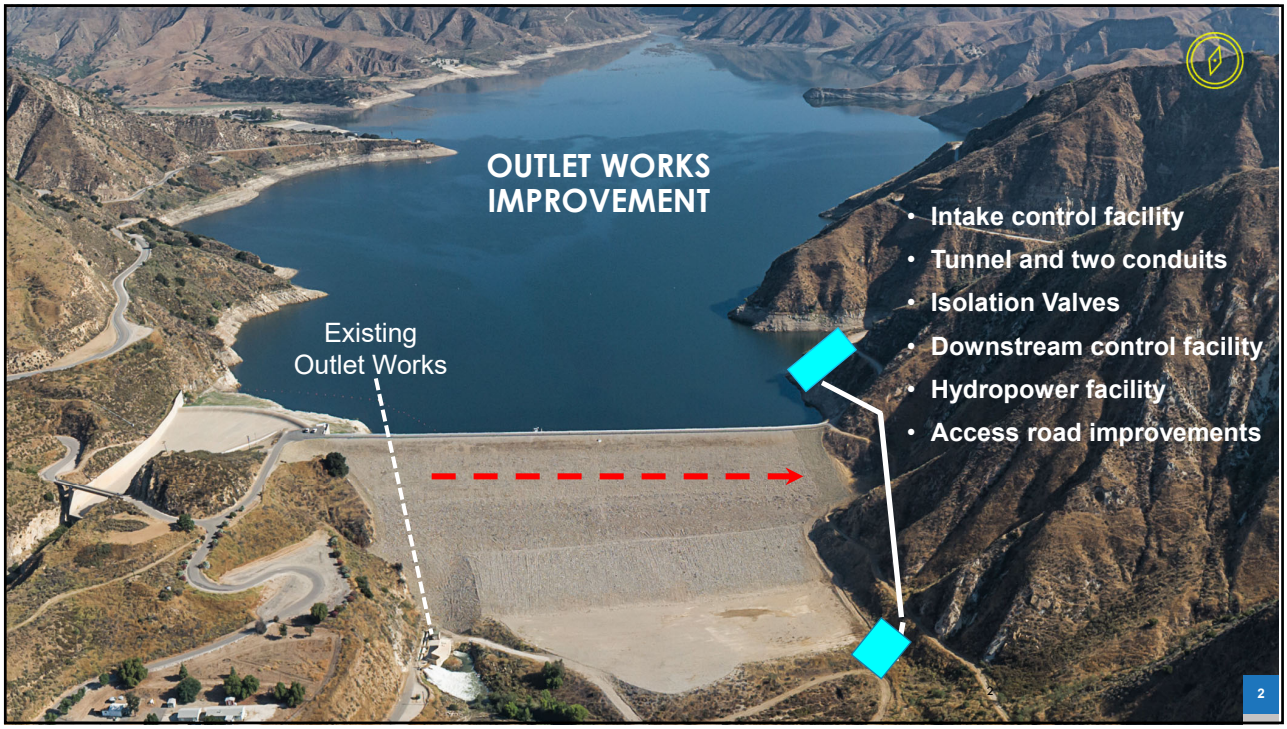
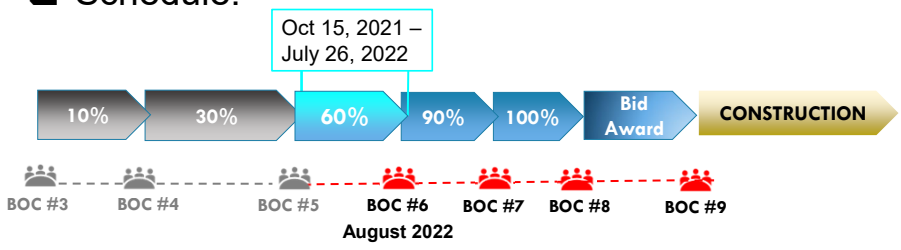

OUTLET WORKS IMPROVEMENT
Existing Outlet Works
• Intake control facility
• Tunnel and two conduits
• Isolation Valves
• Downstream control facility
• Hydropower facility
• Access road improvements
2

2

Outlet Works Improvement Project - 60% Design

- Scope of Work:
  - Design and Analyses
  - Plans and Specifications
  - Geotechnical Baseline Report (GBR)
  - Updated Cost Estimate and Constructability Report
  - BOC Meeting # 6
- Fee:
  - $1,715,706
- Schedule:

UWCD REQUEST FOR TIME EXTENTION PENDING FERC APPROVAL



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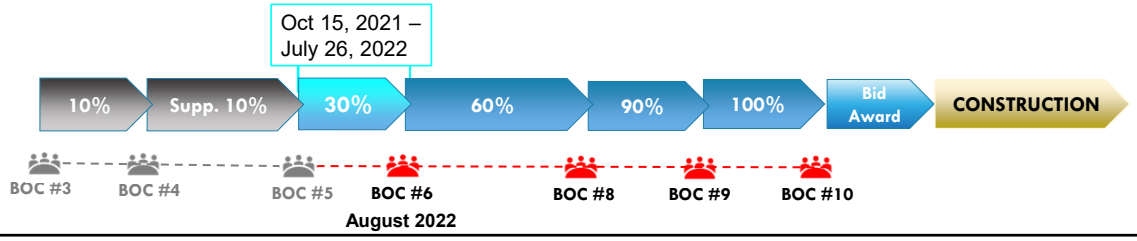
Spillway Improvement Project - 30% Design

- Scope of Work:
  - Design and Analyses
  - Plans and Specifications
  - Updated Cost Estimate and Constructability Report
  - BOC Meeting # 6
- Fee:
  - $579,948
- Schedule:

UWCD REQUEST FOR TIME EXTENTION PENDING FERC APPROVAL



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Santa Felicia Dam Safety Improvement Project Progress

Tasks	2021				2022								
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BOC Meeting No. 5	◆												
60% Design of New Outlet Works													
30% Design of Spillway Improvement Project													
BOC Meeting No. 6												◆	
FERC License Amendment Application													
FERC Approval for License Amendment													◆
NEPA Document Processing													

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Resolution 2021-18

Freeman Diversion Sediment Management CEQA Analysis

ENGINEERING AND OPERATIONS COMMITTEE | OCTOBER 7, 2021

AGENDA ITEM 3.3

Recommendation for Board consideration in adopting the California Environmental Quality Act (CEQA) Initial Study-Mitigated Negative Declaration (IS-MND) and Approve Phase One of the Freeman Diversion Sediment Management Project and its Implementation

United Water CONSERVATION DISTRICT

1

CEQA Analysis

Two-phase Sediment Management Project to Provide for Operational Reliability

Phase 1

- Avoid water completely, “streamlined approach”
- Single, defined event planned for Fall 2021

Phase 2

- Long-term program
- Address future changed conditions
- Larger area

United Water Conservation District

2

CEQA Findings

Potentially Significant Impacts
less than significant with mitigation incorporated

- Biological Resources
- Cultural Resources
- Geology/Soils
- Tribal Cultural Resources

Significant findings:

- The project will not have a significant impact on the environment
- The project will not make or contribute to significant cumulative impacts
- The project would not have a significant impact on humans

Less Than Significant or No Impacts

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mandatory Findings of Significance
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Utilities/Service Systems
- Wildfire

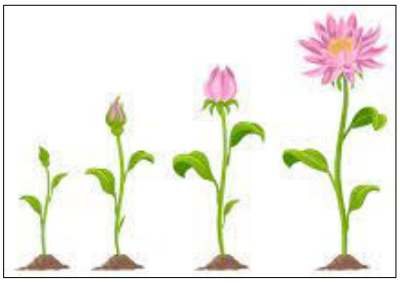
United Water Conservation District 3

3

Mitigation Measures

Pre-project

During project



Post-project

United Water Conservation District 4

4

Request to E&O Committee:

Consider recommending that the Board adopt a Resolution to approve the CEQA Findings, approve Phase One of the Project and its implementation

Questions

ENGINEERING DEPARTMENT MONTHLY UPDATE

October 7, 2021

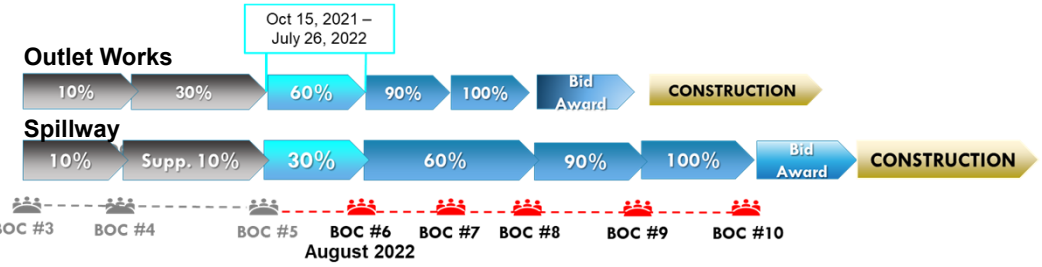
United Water CONSERVATION DISTRICT

1

Santa Felicia Dam Safety Improvement Project

Board of Consultants Meeting No. 5 held September 21 – 23

- ❑ 30 percent design of outlet works
- ❑ Supplemental 10 percent design of spillway improvements
- ❑ 2020 drilling program results
- ❑ Federal and state permitting
- ❑ Design of new release channel technical assistance meetings and discussions
- ❑ United to proceed with the next design phases



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Santa Felicia Dam Safety Improvement Project Funding Applications

- 2021 High Hazard Potential Dams (HHPD) Grant Program
  - Supports dam rehabilitation planning and design costs
    - ✓ DSOD application to Federal Emergency Management Agency (FEMA) in June 2021
    - ✓ Request for $1.365 million to fund the next design phase
    - ✓ Federal Share: 65%, Local match: 35%
- 2021 EPA Water Infrastructure Finance and Innovation Act (WIFIA)
  - UWCD application for a low interest loan to support SFD SIP construction costs on July 23, 2021
    - ✓ Request for a loan up to $51.6 million (50% of anticipated construction costs)
- SFD SIP has received the state legislature representative support

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Iron and Manganese Removal Project

Submittal process underway (GSE Construction)

August 25
Preconstruction meeting with GSE

August 26
Execution of $9.3429 Million construction contract with GSE

August 30
Issued work directive change No. 1 to GSE
(Buy American Act)

September 20
Issued administrative Notice to Proceed to GSE

September 24
Co-signed DCIP grant agreement for $4.21 Million with OLDCC

September 29
Earthwork pre-construction meeting

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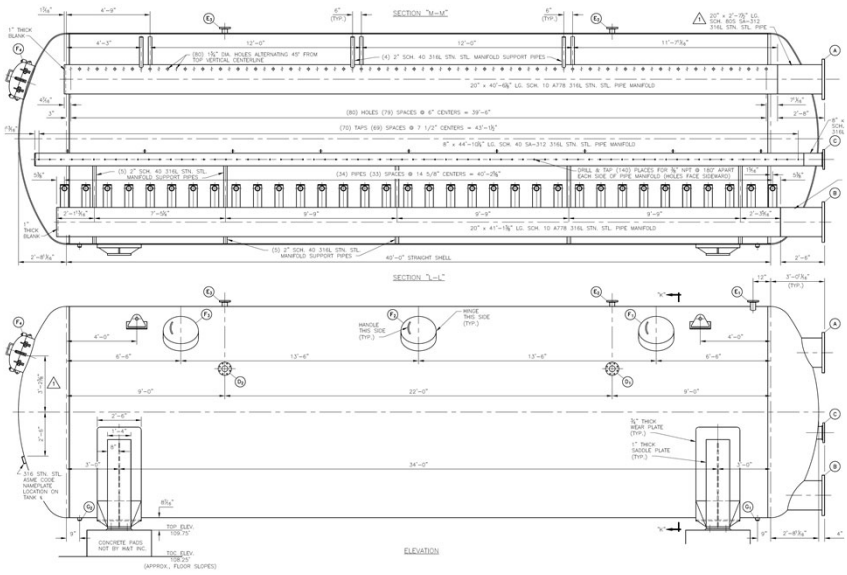
Iron and Manganese Removal Project

- Approximately 30 submittal packages received from GSE Construction to date and under review.
- Nearly 250 submittal packages anticipated in total.



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OH System Backup Generator Project

- ❑ Three transformers were installed
- ❑ Existing fuel tank cleaning completed on August 31
- ❑ Four light poles were installed
- ❑ PLC cabinet was replaced
- ❑ Delay in manufacturing and delivery of remaining electrical cabinets
- ❑ Construction completion by Dec 23
- ❑ The 3rd quarterly report and 3rd reimbursement report due October 15
- ❑ $66,690.72 has been received to date

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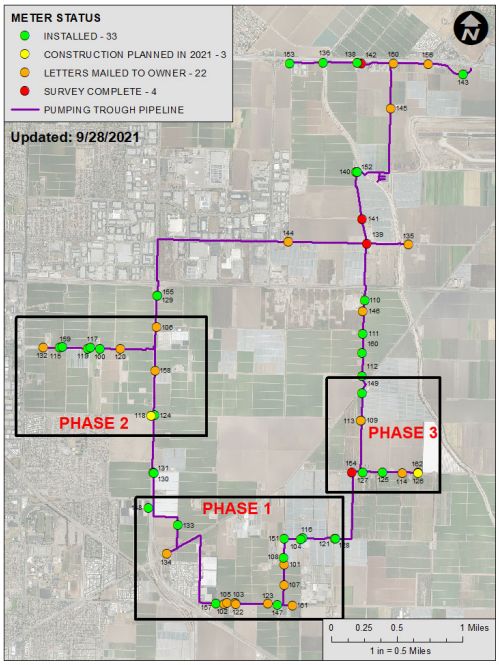
PTP Metering Improvement Project

	CY 2016-2020	CY 2021	Total
Installations	20	13	**33**
Easements Obtained	12	4	**16**
Letters to Owners	33	6	**39**
Field Surveys	48	0	**48**



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SWP Interconnection Project

September 16 - 22

- ❑ The City obtained applicable permits for geotechnical work in the river
- ❑ United allowed the City to proceed with the drilling work
- ❑ Bio survey prior to preconstruction meeting
- ❑ Preconstruction meeting
- ❑ Work to be completed over two weeks

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Funding Applications Status

Grant Program	Grant Program Summary	Deadline
DOD – DCIP Defense Community Infrastructure Program	Ask: $4.37 M	• Initial application, July 12 • Invitation to apply, August 16 • Final application, August 27
FEMA HHPD High Hazard Potential Dams - California, DSOD: Applicant UWCD: sub applicants	Planning and design Total grant program: $11.6 M Ask: $1.37M (60% Design/30% Design) Federal Share: 65% Non-federal Match: 35%	• Initial HHPD application on July 16 • Final application date pending **Congress Woman Julia Brownley's Letter to FEMA supporting funding SFD SIP on Sept 7**
EPA WIFIA Water Infrastructure Finance and Innovation Act	Low Interest Rate Loan Total Grant Program: $5.5 B Federal Share: up to 49% Ask: $51.7 M	• Initial WIFIA application on July 23 • Final application date pending
DWR Prop 1 Groundwater Grant Program Round 3	Implementation Projects for groundwater clean up and WQ improvements State Match: 50% Ask: $4.225 M	• Initial application submitted on September 7 • Final Application due in Nov 2021 • Preliminary Award Date: Summer 2022
CalOES Community Power Resiliency Allocations to Special Districts Program	Financial support for furnishing and installing backup generators at 3 locations within the Service Area.	• Received grant award for $198,612

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Freeman Diversion Rehabilitation

- ❑Geotechnical services contract in place to inform the engineering design of the hardened ramp.
- ❑Physical modeling of hardened ramp fish passage in progress

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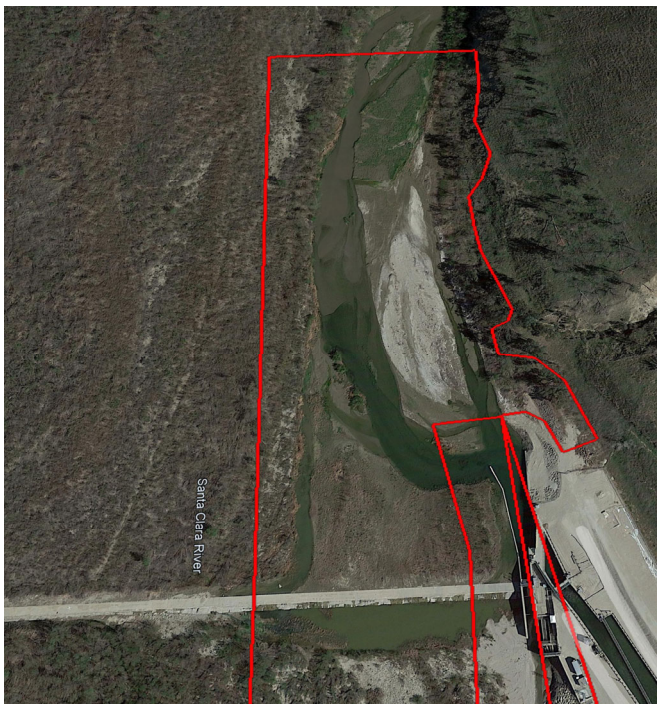

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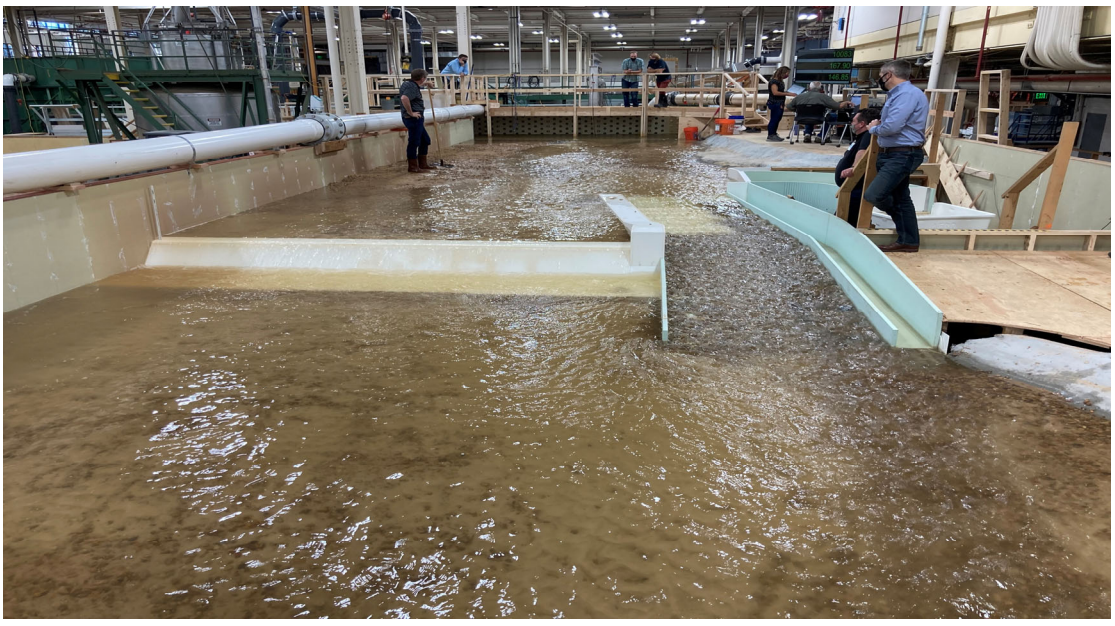

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QUESTIONS

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United Water
CONSERVATION DISTRICT
Environmental Services Department
Project Highlights
Environmental Services Manager
Linda Purpus
October 7, 2021 | Agenda Item 4.2
Engineering and Operations Committee

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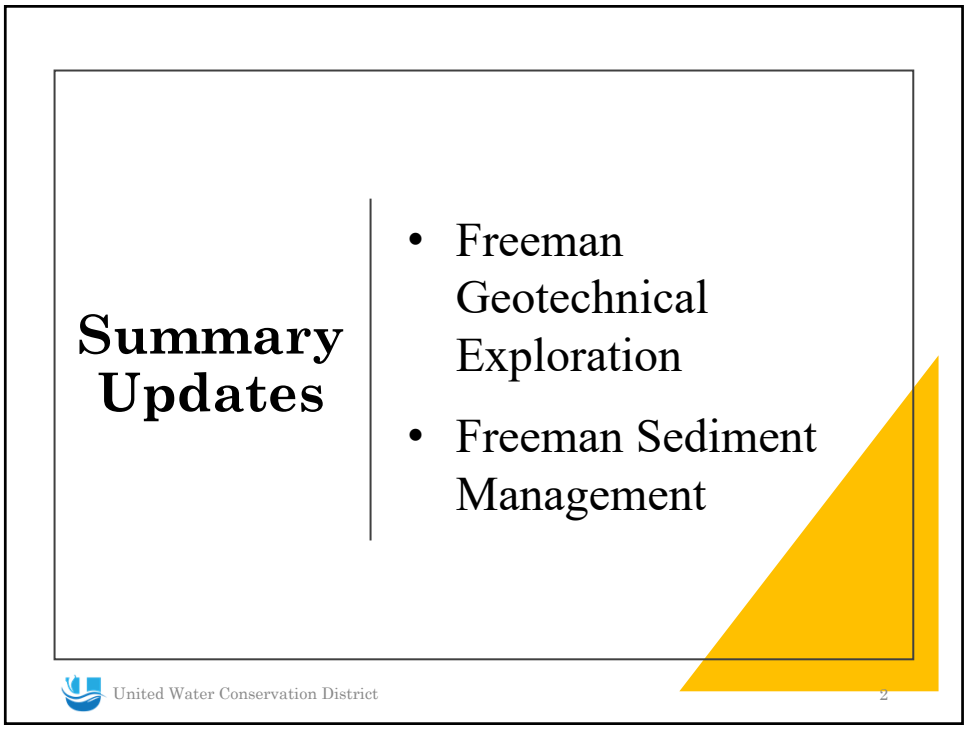
Summary Updates
• Freeman Geotechnical Exploration
• Freeman Sediment Management
United Water Conservation District
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Key Highlight

Presented by:
Randall McInvale
Associate Environmental Specialist

Southern California Steelhead CESA Listing Petition

United Water Conservation District 3

3

Listing Petition Background

- **June 14, 2021**: Fish and Game Commission (Commission) received the listing petition from CalTrout
- **July 16, 2021**: Commission published notice of receipt
- **August 18, 2021**: Commission officially received petition at meeting and granted 30-day extension to Dept. of Fish and Wildlife (CDFW) for evaluation of the petition
- **December 15-16, 2021**: Commission scheduled to receive the CDFW 90-day evaluation
- **February 16-17, 2022**: Commission determines if listing may be warranted

United Water Conservation District 4

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Contents of the Petition

- Southern California Coast Distinct Population Segment (DPS)
- "Endangered" status
- Follow the federal listing status above and below barriers

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Process and Challenges Ahead

- Stakeholder involvement
  - To date and next steps
- Commission decision
- If listing is warranted, then what?
  - State Incidental Take Permit

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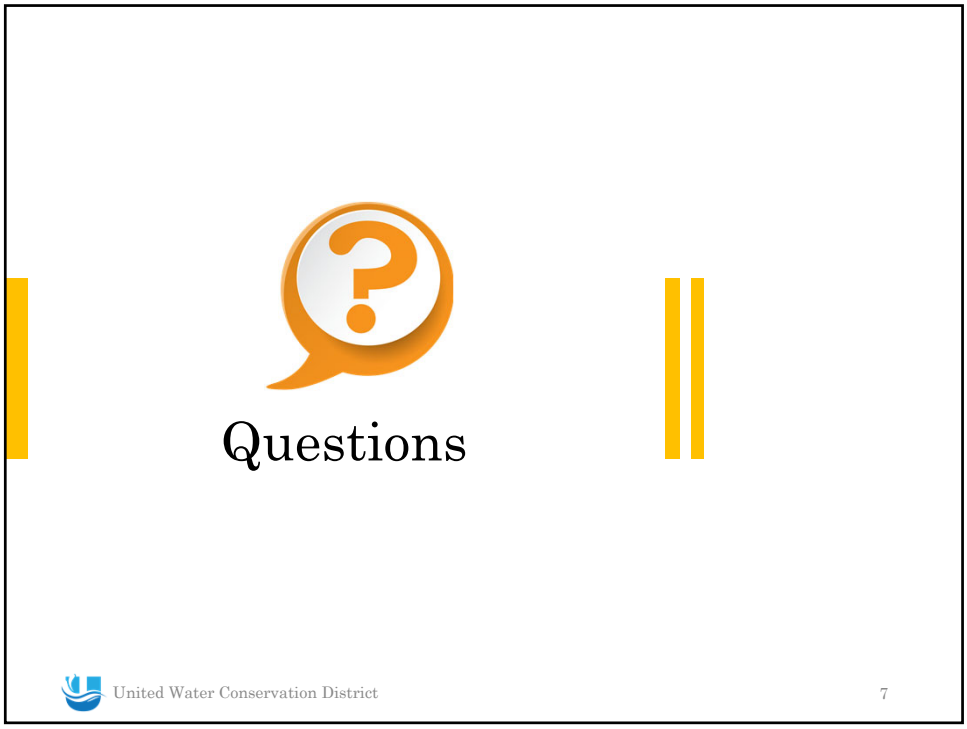

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Operations and Maintenance Update
October 7, 2021

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NEW RADIO LINK INSTALLATION

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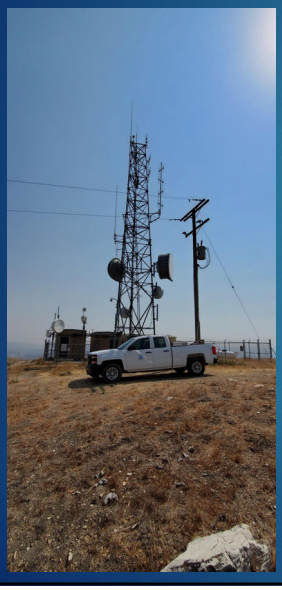

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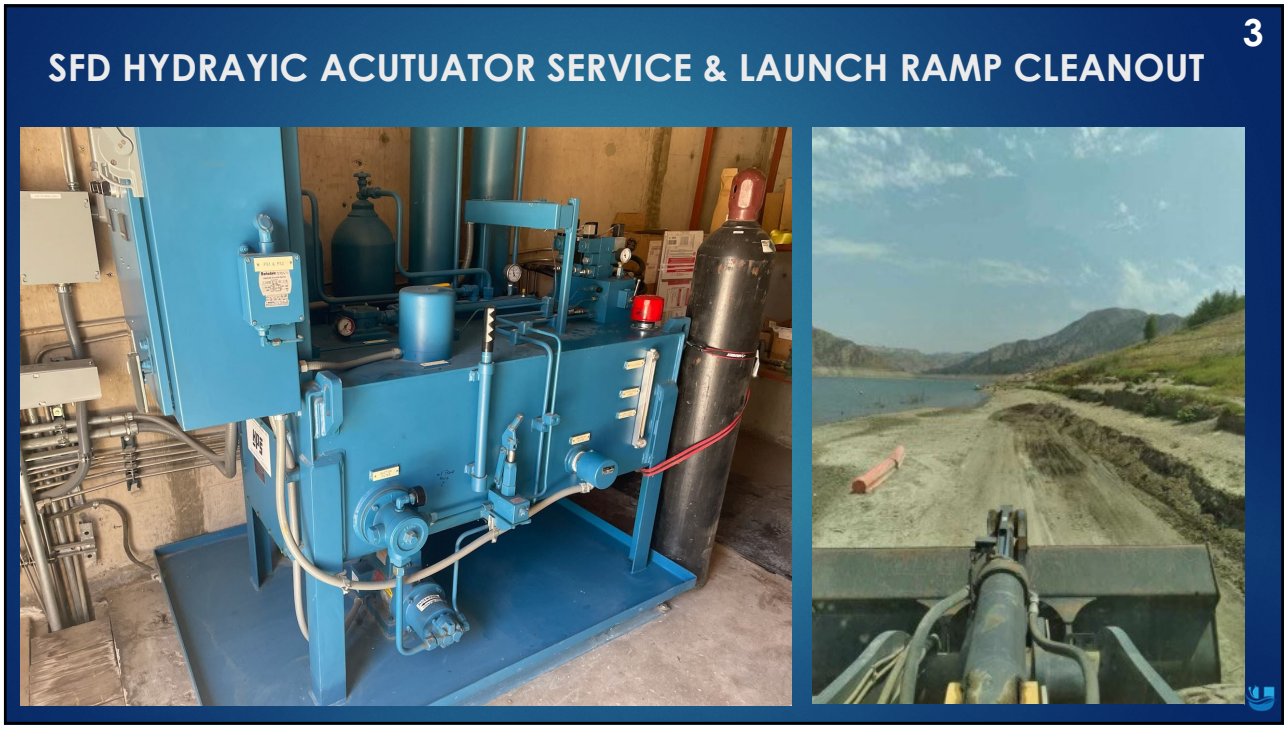
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SFD HYDRAYIC ACUTUATOR SERVICE & LAUNCH RAMP CLEANOUT

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MOSS SCREEN INSPECTION & WINTER OPS PREPARATION

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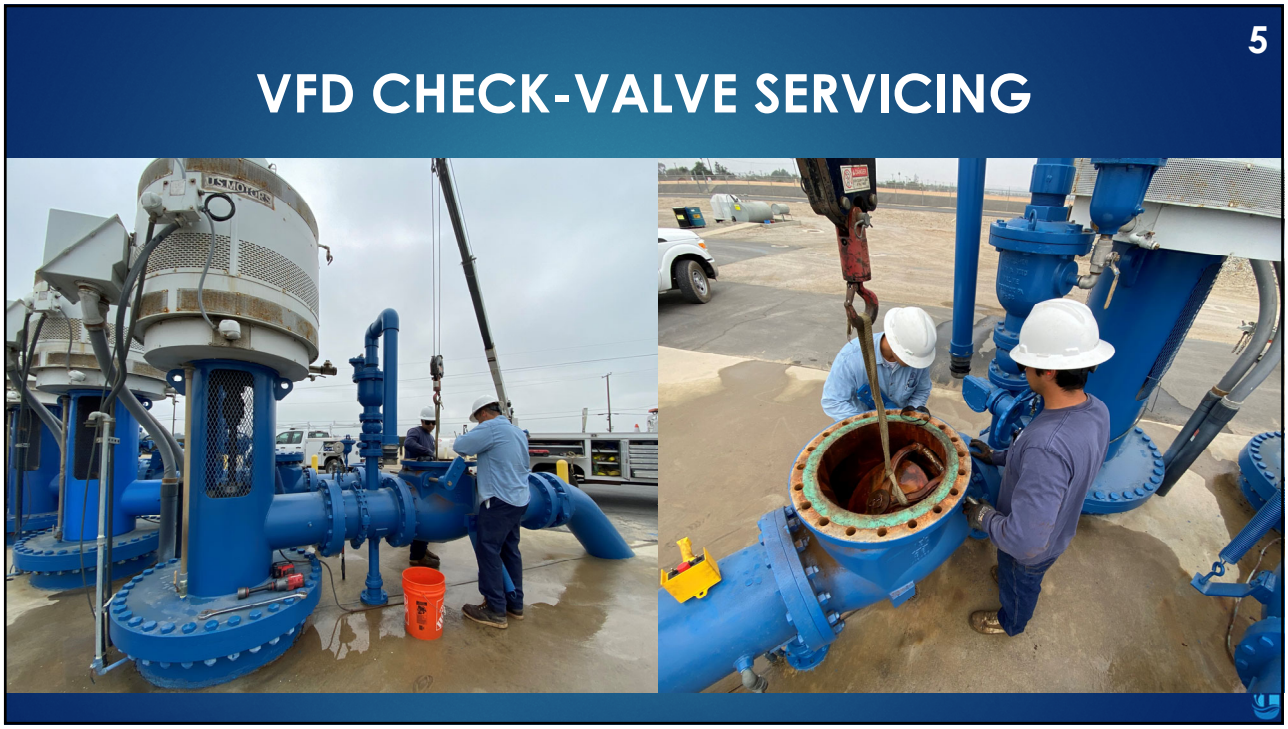

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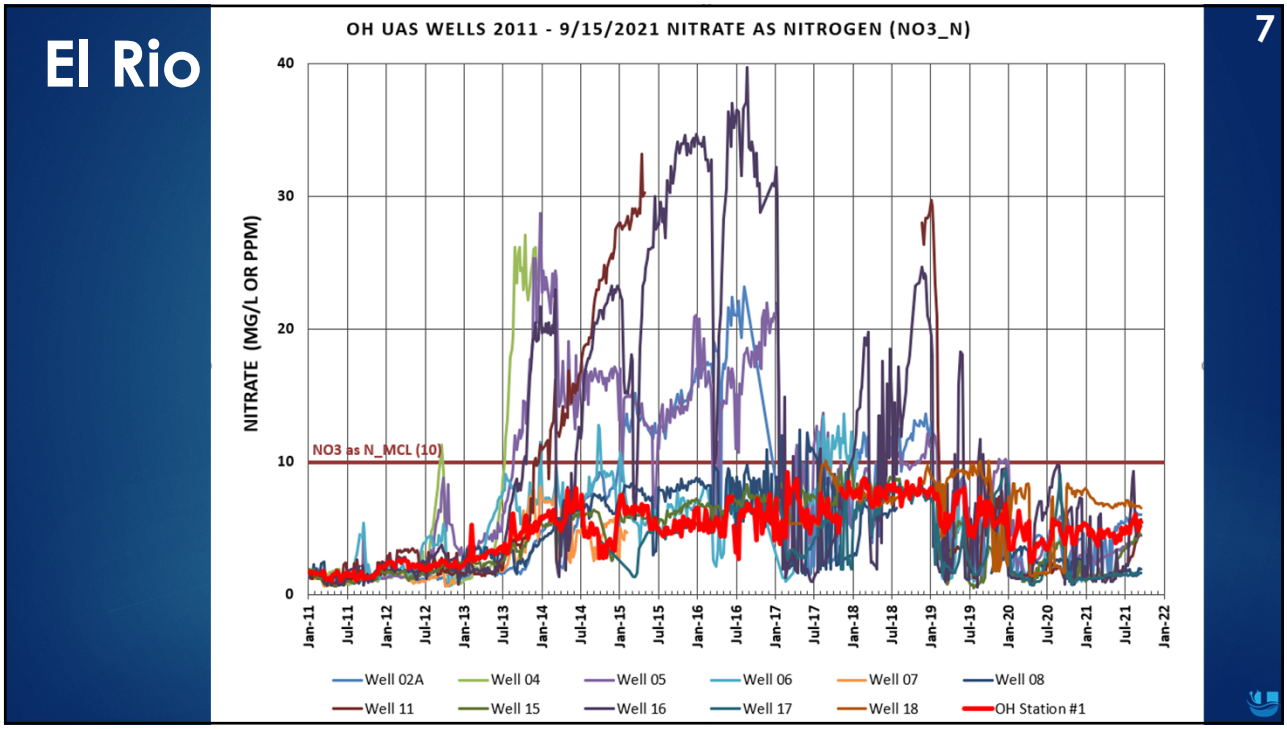
El Rio
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OH UAS WELLS 2011 - 9/15/2021 NITRATE AS NITROGEN (NO3_N)
NITRATE (MG/L OR PPM)
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30
20
10
0
NO3 as N_MCL (10)
Jan-11
Jul-11
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Well 17
Well 18
OH Station #1

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United Water
CONSERVATION DISTRICT
Questions?

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United Water CONSERVATION DISTRICT

Staff Report

To: **Engineering and Operations Committee**

Through: Mauricio E. Guardado, Jr., General Manager
Anthony A. Emmert, Assistant General Manager
Linda Purpus, Environmental Services Manager

From: Tessa Lenz, Associate Environmental Scientist

Date: October 26, 2021 (November 4, 2021 Committee Meeting)

Agenda Item: **3.1 Resolution 2021-22 Adoption of the California Environmental Quality Act Notice of Exemption Determination for the Lake Piru Sediment Sampling Project**
Motion

Staff Recommendation:
The committee will consider recommending approval of Resolution 2021-22, adopting the California Environmental Quality Act (CEQA) Notice of Exemption (NOE) for the Lake Piru Sediment Sampling Project (Project), approving the Project, and directing staff to file the NOE in accordance with CEQA, to the full Board.

Discussion:
The District is the lead agency for the Lake Piru Sediment Sampling Project (Project) under CEQA. The proposed Project consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. The Project's purpose is to obtain information on sediment accumulation within the reservoir to inform future sediment management activities. The proposed Project is categorically exempt from review under CEQA pursuant the California Code of Regulations (CCR) Section 15306 "Information Collection" Class 6. The District has reviewed the proposed Project and has determined that none of the exceptions to categorical exemption set forth in CCR Section 15300.2 apply.

Mission Goal:
Meets mission-related Goal B (System Reliability) and Goal C (Regulatory & Environmental Compliance).

Fiscal Impact:
The County Clerk and Recorder's Office filing fee for the CEQA NOE is $50.00 which is included in the Adopted Fiscal Year 2021-22 Budget under project account 051-400-81080; 8005-825.

Attachment A – Resolution 2021-22
Attachment B – Notice of Exemption

RESOLUTION 2021-22

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UNITED WATER CONSERVATION DISTRICT IN ACCORDANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT, APPROVING ADOPTION OF A NOTICE OF EXEMPTION AND APPROVAL OF THE LAKE PIRU SEDIMENT SAMPLING PROJECT

WHEREAS, the United Water Conservation District ("District") intends to conduct sediment sampling within Lake Piru to obtain information on the character of sediments that have accumulated within the reservoir; and

WHEREAS, the Lake Piru Sediment Sampling Project (Project) will be performed at four target exploratory test pit locations and Project work will be completed within a maximum duration of three (3) working days; and

WHEREAS, the work window will be limited to January 11 through March 15, 2022; and

WHEREAS, the District has reviewed the proposed Project and has determined that it is categorically exempt from the provisions of the California Environmental Quality Act ("CEQA") pursuant to the Class 6, Information Collection, categorical exemption under State CEQA Guidelines section 15306 because the proposed Project involves basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource; and

WHEREAS, under CEQA Guidelines Section 15300.2, a project exempt under Class 6 that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, a Class 6 exemption would apply except where the Project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; and

WHEREAS, federally designated critical habitat is present in or adjacent to the Project area for three species including arroyo toad (Anaxyrus californicus, federally endangered), California red-legged frog (Rana draytonii, federally threatened), and southwestern willow flycatcher (Empidonax traillii extimus, state and federally endangered); and

WHEREAS, there is no suitable habitat in the Project area for arroyo toad or California red-legged frog and there have not been any documented occurrences of California red-legged frog within three miles of the Project area in over 50 years; and

WHEREAS, due to the nature of the lake level fluctuations and potential inundation of the area, the current southwestern willow flycatcher habitat is transient and no records of southwestern willow flycatcher have been documented in the wildlife agencies databases within a three-mile radius of the Project area; and

WHEREAS, as a result of the Project's design features, no impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies will occur; and

WHEREAS, the District has reviewed the proposed Project and has determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UNITED WATER CONSERVATION DISTRICT AS FOLLOWS:

1. The District Board of Directors hereby finds that approval of the Project is not subject to environmental review under CEQA (Pub. Resources Code, § 21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), on grounds that the Project is categorically exempt. Specifically, the Board of Directors finds that the Project is categorically exempt pursuant the Class 6, Information Collection exemption (State CEQA Guidelines, § 15306).

2. Under CEQA Guidelines Section 15300.2, a project exempt under Class 6 that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, a Class 6 exemption would apply except where the Project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

3. Federally designated critical habitat is present in or adjacent to the Project area for three species including arroyo toad (Anaxyrus californicus, federally endangered), California red-legged frog (Rana draytonii, federally threatened), and southwestern willow flycatcher (Empidonax traillii extimus, state and federally endangered).

4. There is no suitable habitat in the Project area for arroyo toad or California red-legged frog and there have not been any documented occurrences of California red-legged frog within three miles of the Project area in over 50 years. In addition, due to the nature of the lake level fluctuations and potential inundation of the area, the current southwestern willow flycatcher habitat is transient and no records of southwestern willow flycatcher have been documented in the wildlife agencies databases within a three-mile radius of the Project area. As a result of the Project's design features, no impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies will occur.

5. District has reviewed the proposed Project and has determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

6. The Board hereby approves the Lake Piru Sediment Sampling Project and authorizes its implementation when deemed appropriate by the General Manager.

7. The Board hereby authorizes and directs the District's Environmental Services Manager to file a Notice of Exemption ("NOE") for the Project in accordance with CEQA.

8. The foregoing recitals are true and correct and incorporated herein as if fully set forth.

PASSED, APPROVED AND ADOPTED this 10th day of November 2021.

ATTEST:_____

Michael W. Mobley, Board President

ATTEST:_____

Sheldon G. Berger, Board Secretary/Treasurer

NOTICE OF EXEMPTION

To:
Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

Ventura County Clerk
800 South Victoria Ave
Ventura, CA 93009

From:
United Water Conservation District
1701 North Lombard Street, Suite 200
Oxnard, CA 93030

Project Title: Lake Piru Sediment Sampling Project

Project Location: Lake Piru, Ventura County, California (Figure 1)

Name of Public Agency Approving Project (Lead Agency): United Water Conservation District

Name of Person or Agency Carrying Out Project: United Water Conservation District

Project Description: United Water Conservation District (United) proposes to conduct the Lake Piru Sediment Sampling Project (Project) for the purpose of obtaining information on the character of sediments that have accumulated within the reservoir over the past 65 years following dam construction in 1955. Sampling will be performed at four target exploration locations and all four test pits will be completed within a maximum duration of three (3) working days (see Figure 2). The timing of work activities will be limited to January 11 through March 15, 2022 (if permits and authorizations are received in time, United will prioritize completing work prior to February 15, 2022). A test pit will be performed at each location, designated TP1 through TP4. The test pits will be logged in general accordance with ASTM D5434, *Standard Guide for Field Logging of Subsurface Explorations of Soil and Rock*. The soil samples obtained from the test pits will be logged in general accordance with the Unified Soils Classification System as described in ASTM D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*.

Test pits will be performed with a backhoe excavator with the ability to excavate to a depth of 12 feet. Bulk samples of representative materials from the test pits will be obtained and placed in five-gallon buckets with a sealable lid to preserve moisture content of the material. The soil stratigraphy and the depth to groundwater, if encountered, will be documented on test pit logs and with photographs. Excavations will be 12 feet deep, however, excavations need not extend below groundwater level and groundwater would be avoided when encountered. The test pits will be backfilled with the material excavated from the pits. The backfill material will be placed in nominal 12-inch-thick layers, and each layer tamped with the backhoe bucket. The surface layer will be wheel-rolled (e.g., sheepshead roller) with the backhoe. A general 25-foot-radius work area surrounding the

test pits will be established for the staging and operation of construction vehicles and equipment.

The Project will incorporate best management practices (BMPs) designed to avoid or reduce the potential for impacts to sensitive natural resources. The BMPs include guidelines for Project implementation such as seasonal timing of work, delineating work and access boundaries, and maintaining a high level of environmental awareness through biological monitoring and worker environmental awareness training. Limiting the size of the work areas for TP1 and TP2 and accessing the work areas from the existing Juan Fernandez boat launch ramp by overland truck travel using rubber-wheeled vehicles will further reduce any potential for impacts to sensitive natural resources. By the end of each workday, all excavations will be backfilled or covered. Work activities will only be conducted in dry lakebed areas (i.e., no work will occur in ponded or flowing water).

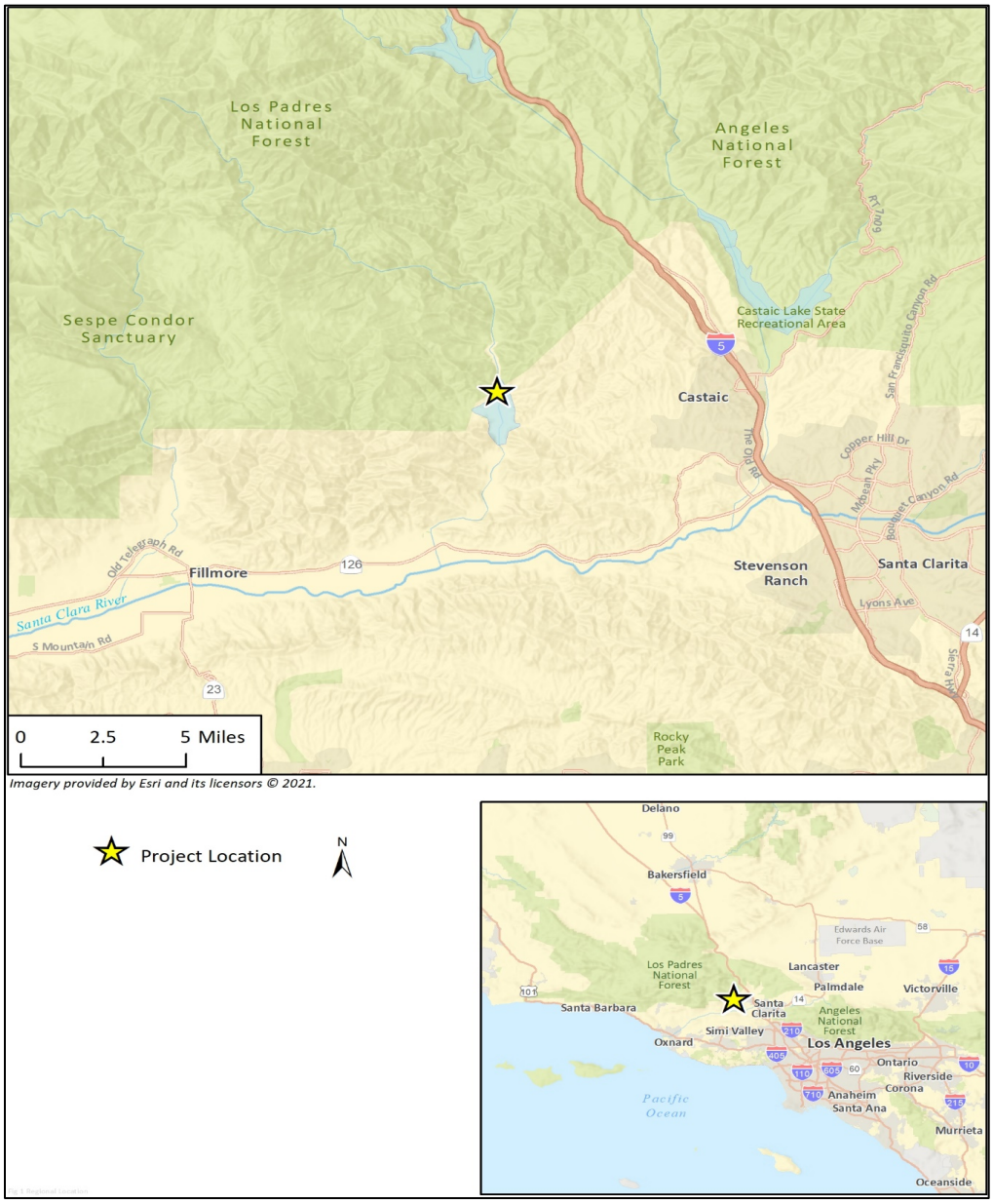

Figure 1. Regional location of Project Area.

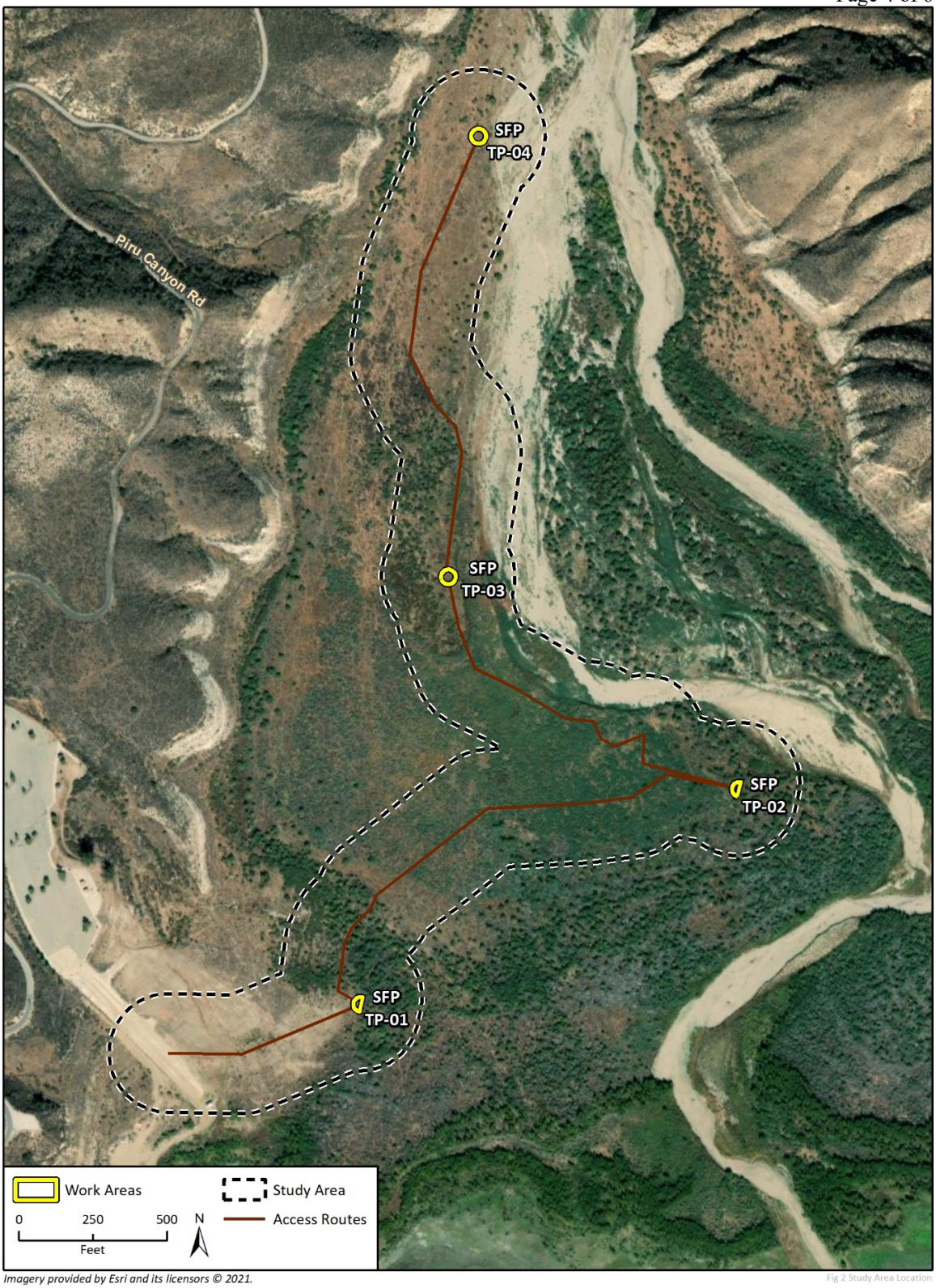

Figure 2. Project Area and proposed test pit sample sites.

Exempt Status:
__ Ministerial (Sec. 21080(b)(1); 15268)
__ Declared Emergency (Sec. 21080(b)(3); 15269(a))
__ Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
X Categorical Exemption. State type and section number: Class 6, Section 15306 – Information Collection
__Statutory Exemptions

Reasons Why Project is Exempt: The Project is categorically exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15306 *Information Collection* (Class 6). Section 15306 *Information Collection* consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. The Project's purpose is to obtain information on sediment accumulation within the reservoir to inform the planning of future sediment management activities. The Project will not result in a serious or major disturbance to an environmental resource. Therefore, the *Information Collection* exemption is applicable.

Under CEQA Guidelines Section 15300.2*,* a project exempt under Class 6 that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, a Class 6 exemption would apply except where the Project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies. Federally designated critical habitat is present in or adjacent to the Project area for three species including arroyo toad (*Anaxyrus californicus,* federally endangered), California red-legged frog (*Rana draytonii,* federally threatened), and southwestern willow flycatcher (*Empidonax traillii extimus,* state and federally endangered). However, there is no suitable habitat in the Project area for arroyo toad or California red-legged frog and there have not been any documented occurrences of California red-legged frog within three miles of the Project area in over 50 years. In addition, due to the nature of the lake level fluctuations and potential inundation of the area, the current southwestern willow flycatcher habitat is transient and no records of southwestern willow flycatcher have been documented in the wildlife agencies databases within a three-mile radius of the Project area. As a result of the Project's design features, no impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies will occur. The District has determined that none of the exceptions to categorical exemption set forth in CEQA Guidelines Section 15300.2 would apply.

Lead Agency Contact Person: Linda Purpus, Environmental Services Manager
Telephone: 805-525-4431
Email: lindap@unitedwater.org

_____

Linda Purpus Date
Environmental Services Manager, United

Date OPR received for filing:_____

United Water CONSERVATION DISTRICT

Staff Report

To: **Engineering and Operations Committee**

Through: Mauricio E. Guardado, Jr., General Manager

From: Maryam Bral, Chief Engineer
Craig Morgan, Engineering Manager

Date: October 26, 2021 (November 4, 2021 Committee Meeting)

Agenda Item: **3.2 Resolution 2021-23 Adopting a Notice of Exemption under CEQA and Approving the El Rio Water Well No. 19 Project**
Motion

Staff Recommendation:
The committee will consider recommending approval of Resolution 2021-23, adopting a Notice of Exemption under the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") and Approving the El Rio Water Well No. 19 Project ("Project"), to the full Board. The Resolution will authorize the Project's implementation when deemed appropriate by the General Manager and will direct the District's staff to file a Notice of Exemption ("NOE") for the Project in accordance with CEQA.

Discussion:
The District is the lead agency for the proposed Project under CEQA. The proposed Project is the replacement of a 1950's era water well with an updated water well – El Rio Water Well No. 19 – that will be located adjacent to an existing well, with the majority of existing piping reused and constructed to meet the current construction standards.

The proposed Project is exempt from the provisions of CEQA pursuant to the State CEQA Guidelines (Cal. Code Regs., tit. 14, §15000 et seq.). Specifically, the proposed Project is exempt because it consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use (State CEQA Guidelines, §15301). In addition, the proposed Project is exempt because it consists of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity (State CEQA Guidelines, §15302). The proposed Project is also exempt because it consists of the construction and location of a limited number of new, small facilities or structures (State CEQA Guidelines, §15303). The proposed Project was reviewed and it was determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

Agenda Item 3.2 **Resolution 2021-23 Adopting a Notice of Exemption under CEQA and Approving the El Rio Water Well No. 19 Project**
Motion

Mission Goal:
Meets Mission-Related Goal B, System Reliability – Ensure that the District's existing and planned water supply, conveyance, and recharge systems meet regional needs, including emergency response.

Fiscal Impact:
The County Clerk and Recorder's Office filing fee for the CEQA NOE is $50.00 which is included in the Adopted Fiscal Year 2021-2022 Budget.

Attachment A – Notice of Exemption
Attachment B – Resolution 2021-23

Print Form

3.2 Attachment A - CEQA NOE for El Rio Water Well No. 19

Notice of Exemption

Appendix E

To:

County Clerk
County of: Ventura
800 S. Victoria Ave.
Ventura, CA 93009

From: (Public Agency): United Water Conservation District
1701 Lombard Street, Suite 200
Oxnard, California 93030
(Address)

Project Title: El Rio Water Well No. 19

Project Applicant: United Water Conservation District

Project Location - Specific:
3561 N. Rose Avenue, Oxnard CA 93036

Project Location - City: Oxnard Project Location - County: Ventura

Description of Nature, Purpose and Beneficiaries of Project:
The Project is the replacement of a 1950's era water well with an updated water well – El Rio Water Well No. 19 – that will be located adjacent to an existing well, with the majority of existing piping reused and constructed to meet the current construction standards.

Name of Public Agency Approving Project: United Water Conservation District

Name of Person or Agency Carrying Out Project: United Water Conservation District

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: Class 1, Section 15301, Class 2, Section 15302 and Class 3, Section 15303
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:
The Project is exempt because it consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use. In addition, the Project is exempt because it consists of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The Project is also exempt because it consists of the construction and location of a limited number of new, small facilities or structures. The Project was reviewed and it was determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

Lead Agency Contact Person: Craig Morgan Area Code/Telephone/Extension: 805-525-4431

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: _____ Date: _____ Title: General Manager

▪ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

Revised 2011

RESOLUTION 2021-23

RESOLUTION OF THE BOARD OF DIRECTORS OF THE UNITED WATER CONSERVATION DISTRICT ADOPTING A NOTICE OF EXEMPTION AND APPROVING THE EL RIO WATER WELL NO. 19 PROJECT IN ACCORDANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

WHEREAS, for the purpose of continued supply of potable water to facilities, the United Water Conservation District ("District") proposes the replacement of a 1950's era water well with an updated water well – El Rio Water Well No. 19 – that will be located adjacent to an existing well, with the majority of existing piping reused and constructed to meet the current construction standards ("Project"); and

WHEREAS, the District has reviewed the proposed Project and has determined that it is categorically exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") pursuant to the Class 1, Existing Facilities, categorical exemption in State CEQA Guidelines (Cal. Code Regs., tit. 14, §15000 et seq.) section 15301, because the proposed Project consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use; and

WHEREAS, the District has reviewed the proposed Project and has determined that it is also categorically exempt from the provisions of CEQA pursuant to the Class 2, Replacement or Reconstruction, categorical exemption in State CEQA Guidelines section 15302, because the proposed Project consists of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity; and

WHEREAS, the District has reviewed the proposed Project and has determined that it is also categorically exempt from the provisions of CEQA pursuant to the Class 3, New Construction or Conversion of Small Structures, categorical exemption in State CEQA Guidelines section 15303, because it consists of the construction and location of a limited number of new, small facilities or structures; and

WHEREAS, the District has reviewed the proposed Project and has determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UNITED WATER CONSERVATION DISTRICT AS FOLLOWS:

1. The Board hereby finds that approval of the Project is not subject to environmental review under CEQA and the State CEQA Guidelines, on grounds that the Project is categorically exempt. Specifically, the Board of Directors finds that the Project is categorically

exempt pursuant to Class 1, Existing Facilities, (State CEQA Guidelines, §15301), pursuant to Class 2, Replacement or Reconstruction, (State CEQA Guidelines, §15302) and also pursuant to Class 3, New Construction or Conversion of Small Structures, (State CEQA Guidelines, §15303).

2. The District has reviewed the proposed Project and has determined that none of the exceptions to categorical exemption set forth in State CEQA Guidelines section 15300.2 apply.

3. The Board hereby approves the Project and authorizes its implementation when deemed appropriate by the General Manager.

4. The Board hereby authorizes and directs the District's staff to file a Notice of Exemption for the Project in accordance with CEQA.

5. The foregoing recitals are true and correct and incorporated herein as if fully set forth.

PASSED, APPROVED AND ADOPTED this 10th day of November 2021.

Michael W. Mobley, President	Sheldon G. Berger, Secretary/Treasurer

United Water
CONSERVATION DISTRICT

Staff Report

To: **Engineering and Operations Commitee**

Through: Mauricio E. Guardado, Jr., General Manager

From: Linda Purpus, Environmental Services Manager
Evan Lashly, Environmental Scientist

Date: October 26, 2021 (November 4, 2021 Committee Meeting)

Agenda Item: **3.3 Pre-implementation Studies in Support of Federal Energy Regulatory Commission Fish Passage Assessment – Amendment to Professional Services Agreement with Cramer Fish Sciences - $440,950**
Motion

Staff Recommendation:
The Committee will consider recommending approval of the motion item authorizing the General Manager to execute an amendment to the professional services agreement (PSA) with Cramer Fish Sciences in the amount of $440,950 to re-initiate pre-implementation study activities outlined in the "Santa Felicia Dam Fish Passage Program Pre-Implementation Study Plan" to the full Board.

Background:
In April, 2017, the District submitted a Fish Passage Feasibility Assessment Report for the Santa Felicia Project to the Federal Energy Regulatory Commission (FERC), National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife (CDFW). The District's FERC license and the associated biological opinion issued by NMFS require United to study fish passage feasibility and submit a report containing the results. The submitted report conveys United's intent regarding a preferred long-term solution on fish passage at the Santa Felicia Project. As noted in the report, implementation of long-term fish passage is contingent on resolution of certain outstanding issues, including uncertainties regarding the engineering and biological feasibility of preferred passage alternatives, and development of biological criteria that would trigger implementation of preferred passage alternatives.

On December 17, 2017, the District executed a contract with Cramer Fish Sciences to develop pre-implementation studies to address remaining uncertainties. On March 20, 2018, Cramer Fish Sciences provided United with the "Santa Felicia Dam Fish Passage Program Pre-Implementation Study Plan" (study plan). The study plan outlines measures to fill in the following knowledge gaps associated with *Oncorhynchus mykiss* in middle Piru Creek: 1) population dynamics (number, size, and timing of fish movement); 2) the number and size class of *Oncorhynchus mykiss* that can be removed without jeopardizing the viability of the existing population; and 3) identify the most effective sampling methods, locations, and seasons. The study plan is structured as a three-year (i.e., phase) project. Ultimately, this work is expected to result in high-caliber scientifically

defensible research, that will lead to peer reviewed publication, and form the foundation from which United can evaluate the efficacy of interim passage operations, as well as provide information for establishing biological criteria for triggering development of permanent fish passage facilities.

United and Cramer Fish Sciences began implementing this work in April 2018. The first phase project activities were completed during FY 2018-19. The second phase project activities were initiated in fall 2019 and subsequently interrupted in March 2020 due to COVID-19. The PSA has been amended for each phase of the project, and funding for the studies has been allocated on an annual basis.

Discussion:
The initial phase of the study plan was aimed at gathering basic population dynamics information to inform the second phase of the study. The second phase of study was designed to be more extensive and include installation and monitoring of traps, and electrofishing. Components of the second phase of studies were initiated but not completed due to the pandemic. Staff proposes to re-initiate the study elements where they were interrupted, attempting to incorporate the second and third phases where appropriate, with the understanding that there may be a need for additional study activities during 2022-23. The proposed amendment would increase the contract by $440,950 and result in a total revised not-to-exceed amount of $1,275,490.

A copy of the Amendment to the Professional Consulting Service Agreement detailing Cramer Fish Science's complete proposal, including the scope of work and deliverables, proposed fee, and the project schedule, is included in Attachment A.

Fiscal Impact:
Funding for the services to be conducted under the proposed amendment is available in the FY 2021-22 Budget (050-600-52220; 4340-300). If additional study elements are needed to complete the pre-implementation studies, funding for the final phase (Fall 2022 – Spring 2023) would be included in FY 2022-23 Budget.

Attachment A – Sixth Amendment to the Professional Consulting service Agreement with Cramer Fish Sciences

SIXTH AMENDMENT TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

This Amendment to the Agreement for Professional Consulting Services is entered into as of _____, 2021, by and between **United Water Conservation District** (UNITED), a public entity, and **Cramer Fish Sciences** (CONSULTANT) with reference to the following terms and conditions:

WITNESSETH

WHEREAS, on December 17, 2017, UNITED and CONSULTANT entered into a Professional Consulting Services AGREEMENT for the purpose of developing a study plan and providing specific support in United's effort to pursue fish passage at the Santa Felicia Project, and subsequently entered into amendments to the AGREEMENT to implement the study plan including a FIRST AMENDMENT on May 11, 2018, a SECOND AMENDMENT on May 21, 2019, a THIRD AMENDMENT on June 19, 2019, a FOURTH AMENDMENT on July 11, 2019; and a FIFTH AMENDMENT on July 13, 2021; and;

WHEREAS, UNITED and CONSULTANT have discussed and agreed to amend certain terms and conditions of the AGREEMENT, the FIRST, SECOND, THIRD, FOURTH, and FIFTH AMENDMENTs involving scope of work, and compensation as specified in this SIXTH AMENDMENT.

NOW, THEREFORE, based on the covenants and considerations set forth, UNITED and CONSULTANT mutually agree as follows:

1. The not-to-exceed total charge described in the AGREEMENT, the FIRST, SECOND, THIRD, FOURTH, and FIFTH AMENDMENTs is hereby increased by $440,950. This amendment results in a total revised not-to-exceed amount of: $1,275,490 as total payment inclusive of all services.
2. The Scope of Work included as Exhibit A of the AGREEMENT, Attachment A of the FIRST AMENDMENT, Attachment A of the SECOND AMENDMENT, ITEM 2 of the THIRD AMENDMENT, and Attachment A of the FOURTH AMENDMENT is hereby amended to include the Scope of Work included in Attachment A of this SIXTH AMENDMENT.
3. The term of the AGREEMENT, the FIRST, SECOND, THIRD, FOURTH, and FIFTH AMENDMENTs is hereby extended to expire on August 1, 2022.
4. Each and all other provisions of said AGREEMENT and the FIRST, SECOND, THIRD, FOURTH, and FIFTH AMENDMENTs remain in full force and effect and apply to all services and payments made under this SIXTH AMENDMENT.

UNITED WATER CONSERVATION DISTRICT

By_____
Mauricio E. Guardado, Jr., General Manager

CRAMER FISH SCIENCES

By_____
(Joseph E. Merz, President)

PRE-IMPLEMENTATION STUDY – PHASE 2 CONTINUED SCOPE OF WORK PART 1
1 OCT 2021 – 30 JUNE 2022

In support of United Water Conservation District (United), Cramer Fish Sciences (CFS) developed the Santa Felicia Dam Fish Passage Program Pre-Implementation Study Plan (Study Plan) to provide United a detailed road map for executing a suite of priority studies over the next several years (2018-2023). The Study Plan builds on the Santa Felicia Dam Fish Passage Alternatives Feasibility Report (Panel Report) and defines pre-implementation studies that are intended to facilitate the Implementation and Adaptive Management Process (IAMP) and inform future fish passage decisions. The overarching study plan goal is to fill crucial knowledge gaps limiting the understanding of southern California steelhead (*Oncorhynchus mykiss)* in Piru Creek and inform implementation of the preferred passage alternative, including assessment and long-term maintenance of the *O. mykiss* population above Lake Piru. Ultimately these pre-implementation studies will provide information to resolve some of the specific uncertainties identified in the Panel Report and develop biological trigger criteria for a phased implementation of the preferred alternative. The Study Plan outlines three years of activities. However, due to project the project delays discussed below, hereafter we will refer to the originally outlined "years" as "phases," to maintain clarity as the total project duration may extend beyond three years, but the overall scope of activities has not changed.

Phase 2 studies were affected by COVID-19 related shutdowns; downstream emigrant trapping season was curtailed, and spring mark-recapture study was cancelled. Project activities scheduled for 2020-2021 season were subsequently postponed due to ongoing COVID-19 restrictions. In accordance with the agreement between CFS and United, CFS will repeat the following tasks associated with the Phase 2 of study program, building from lessons learned during previous years (2018-2020). We have also included contingencies for COVID-19 safety measures, including the possibility of limited support from United staff. Due to fieldwork scheduled in the spring, not all proposed Phase 2 Continued work and deliverables can be completed before the end of United's fiscal year (30 June 2022). Therefore, the Phase 2 Continued scope of work and budget has been divided into two parts: Phase 2 Continued Part 1(1 October 2021 – 30 June 2022), consisting of primarily of field work, and Phase 2 Continued Part 2(1 July 2022 – 31 October 2022), consisting primarily of data management, analysis and reporting.

Task 1: Mark-and-Recapture Study

$189,757

This task supports Phase 2 Continued of the Passive Integrated Transponder (PIT) mark-and-recapture study, with surveys in the fall (November) and spring (March-May). Fall 2021 sampling plans will be flexible to account for fire danger and dry sections of the creek due to drought; sampling later in the fall season is expected to provide a greater opportunity for success. The March sampling is a modification from the original Plan timeframe (April-May) to allow crews to access sites when both air and water temperatures are cooler and there is less amphibian activity.

The Phase 2 Continued goal is to PIT tag 1,000 *O. mykiss* within the size range that is likely to migrate and to recapture previously tagged fish. We are permitted to tag 700 *O. mykiss* in the fall and 300 in the spring. Tagging events will span approximately two weeks with sites selected using the Generalized Random Tessellation Stratified (GRTS) sample design in mainstem middle Piru Creek and its tributaries (Agua Blanca and Fish creeks). Even though these tributaries are remote and more difficult to access, they contain critical over-summer habitat, and documented emigrants, based on data from previous years PIT tag detections. During the fall 2021 survey, CFS will sample new GRTS sites via multiple-pass depletion electrofishing, and supplemental tagging outside of GRTS sites via single pass depletion. The spring 2022 surveys will differ due to overlapping with the breeding season for sensitive species, such as arroyo toad *(Anaxyrus californicus)* and California red-legged frog *(Rana draytonii)*. To limit impacts on sensitive species, only a limited number of new GRTS sites will be sampled via multiple-pass depletion electrofishing with no supplemental electrofishing. Spring 2022 sampling will be informed by the results of fall sampling, stream conditions, and permitting limitations. Spring 2022 electrofishing is dependent on renewal of temporary permits issued in 2020. Hook-and-line surveys will supplement spring 2022 electrofishing surveys to deploy tags and will only be implemented if necessary and possible (e.g., assumes temporary SCP will be reissued and that 2021-22 is not an extreme wet or dry water year). Before spring sampling, CFS and United will arrange for staff to be trained in sensitive species identification and mitigation measures (e.g. arroyo toad, willow flycatcher) by a qualified biologist.

Only captured *O. mykiss* > 70mm fork length will be tagged; however, we will prioritize PIT-tagging *O. mykiss* that are within a size range that would be most likely to emigrate in spring 2022 based on previous data (100-200 mm fork length). PIT-tagging fish will enable tracking of individual movements associated with environmental events and developmental stages and provide the basis for population size estimates. Our ability to evaluate the number of possible emigrants, emigrant timing, and trap efficiency is dependent on tagging and recapturing adequate numbers of *O. mykiss* as they move past the PIT tag antennas. Caudal fin tissue for genetic analysis and scale samples will be taken from all captured *O. mykiss*. The genetic tissue and scale

samples will be prepared but not analyzed during Phase 2 Continued; analysis will occur after the 2022-2023 season collections.

Deliverables
Tabular summaries of fish captured, tagged, and individual *O. mykiss* information (e.g., length, weight, condition), general location (lat; long) and field notes. The Fall data will be compiled into memo under the Phase 2 Continued Scope of Work Part 1. Fall and Spring data will be compiled into the yearly report summary under the Phase 2 Continued Scope of Work part 2.

Task 2: Emigrant Trap Install, Training, and Removal

$50,345

Alternative D7 (Piru Creek Collector) is a proposed fish trapping facility located in middle Piru Creek upstream of Lake Piru. The D7 installation and associated facilities are intended to function and effectively trap downstream-migrating *O. mykiss* at flows < 400 cfs and continue operating with reduced efficiency at higher flows (e.g., as high as 1,000 cfs). The objective of this task is to inform United about D7 design, implementation, and effectiveness including: 1) trap type and location, 2) impacts of 'flashy' flow and operational timing, 3) sediment and debris effects, 4) trap capture efficiency, 5) impacts on existing *O. mykiss* populations above Lake Piru, 6) impacts on other sensitive species (e.g., arroyo toad), and 7) information on the timing and magnitude of fish movement associated with local hydrologic and weather conditions.

Rotary screw trap (RST) and fyke trap installation will occur in November or early December. Trap operation and maintenance training will be provided, as needed, during installation and throughout the year. During high flow events, additional CFS staff may be deployed from Central Valley offices to provide expertise to local staff to ensure traps are operated safely and effectively. In addition to trap operation, CFS and United will arrange for staff to be trained in sensitive species identification and mitigation measures (e.g. arroyo toad, willow flycatcher) by a qualified biologist. Trap removal will occur after the *O. mykiss* migratory season (June). Trap operation in the spring and removal in the summer will likely overlap with arroyo toad breeding season (March-July). Therefore, trap removal and operation activities during the breeding season will be coordinated with the U.S. Forest Service to prevent disturbance or injury to arroyo toads.

Deliverables:
Personnel training, trap installation and removal.

Task 3: Emigrant trap monitoring and efficiency studies

$148,285

Within this task we will continue to evaluate two relatively low-tech downstream migrant traps, a fyke trap and an RST, which will be deployed concurrently on middle Piru Creek. Permitting issues and the COVID-19 pandemic shortened the 2020 trapping season; therefore, not all

objectives could be met, and we consider it a pilot year. In Phase 2 Continued, traps will be operated during the full migratory season (approximately December-June), which will provide a wider variety of environmental conditions (if flows allow) and more days to test trap performance. The 2020 season lacked sustained flows above 125 cfs to allow consistent RST operation. Additionally, due to the COVID-19 pandemic, the trap was not operated when the majority of PIT tagged fish were detected at the antennas.

Although traps may be installed and tested in November or early December, their operation will occur from December 2021 through June 2022 (flow and water quality dependent). Traps will be deployed and operated according to characteristics related to flow and debris capacity. Fykes will be operated at flows from 20 to ~250 cfs and RST at flows from ~125 to 1000 cfs. It is possible both methods can work at flows outside these ranges, and we will determine this through experience, while ensuring safe operation. We will conduct trials to determine whether installation of louver panels - to increase velocity of water entering the cone and creating more room for the cone to spin - will allow the RST to operate under lower flow conditions. Flow thresholds for RST operation will be defined by the Phase 2 Continued operational trials.

Based on previous PIT array detections and *O. mykiss* migration patterns in the Santa Clara River, monitoring effort will be increased during high flow events and later in the migratory season (March-May). Additional trap checks, and supplemental staff will support trapping operations during these critical times when storms may disable/damage traps or when *O. mykiss* may have a higher tendency to emigrate. Within this task, we assume that captured *O. mykiss* will be released within middle Piru Creek and not transported to lower Piru Creek.

Results from this task will enable identification of optimal trap location, design, and operation and will support the Group in assessing feasibility of implementing D7. This study will provide a foundation from which expectations of trap performance can be grounded and a better understanding of the tradeoffs between competing alternatives relative to their efficiency in safely capturing out-migrating *O. mykiss*. We expect these studies will generate information on the middle Piru Creek *O. mykiss* population, life history strategies, migratory behavior, and potential magnitude of migration into the reservoir. This information will support United's design of downstream migrant trapping operation that maximizes the likelihood that the passage program will be successful prior to developing permanent facilities.

Trap efficiency studies

The preferred method to estimate trap efficiency is mark-recapture trials using *O. mykiss*, which requires an adequate number of emigrating individuals be captured to obtain a statistically sound efficiency estimate (CAMP 2008). Trap efficiency tests should be conducted frequently during a sampling period, particularly when changes in fish size or environmental conditions (e.g., stream or river discharge, turbidity, etc.) have the potential to significantly affect trap efficiency and movement patterns.

O. mykiss captured in the emigrant traps will be used to estimate trap efficiency to increase chances that marked fish are recaptured while volitionally migrating downstream. Upon first

capture, *O. mykiss* will be marked with a PIT tag and then released upstream of the traps. PIT arrays will also be used to evaluate capture efficiency of the emigrant traps by estimating the proportion of tagged *O. mykiss* passing the trap location. Previous trapping data suggest insufficient numbers of *O. mykiss* will be available in middle Piru Creek to rely on this method alone. Therefore, we may use a combination of (1) estimates of water volume sampled by the trap(s) (CAMP 2008), (2) recapture of nearly-neutrally buoyant particles (Hedrick et al. 2008), and (3) mark-recapture of surrogate species (Roper and Scarnecchia 1996) to estimate trap efficacy.

Deliverables
These data will be compiled into the yearly report summary under the Phase 2 Continued Scope of Work part 2.

References

U.S. Fish and Wildlife Service. 2008. Draft rotary screw trap protocol for estimating production of juvenile Chinook salmon. Document prepared by the U.S. Fish and Wildlife Service, Comprehensive Assessment and Monitoring Program. Sacramento, California. 44 pp

Hedrick, T. N., Bestgen, K. R., and Christopherson, K. D. 2008, Entrainment of semi-buoyant beads as a surrogate for larval razorback sucker, *Xyrauchen texanus*, into flood-plain wetlands of the middle Green River, Utah. In Proceedings of the Colorado River Basin Science and Resource Management Symposium (pp. 185-194).

Roper, B., and Scarnecchia, D. L. 1996. A comparison of trap efficiencies for wild and hatchery age-0 Chinook salmon. *North American Journal of Fisheries Management*, *16*(1), 214-217.

Task 4: Middle Piru PIT Tag Array Operation and Maintenance

$20,607

Two PIT tag arrays will be operated in middle Piru Creek to provide empirical measures of *O. mykiss* emigration timing. These data support analysis of the linkages between environmental conditions (e.g., flow and length of day) and emigration. The arrays also allow for the evaluation of capture efficiency for competing trapping methodologies and support adequate design, planning, and operation of trapping equipment. Deployment and operation of arrays in Year 1 and 2 provided an improved understanding of the unique challenges of designing, installing and operating fisheries monitoring equipment in a stream with a highly variable hydrograph and active channel bed. We learned that the antenna arrays were not able to remain stationary during the bed-mobilizing flows (7-10-year recurrence flow) that occurred in Year 1 and that re-installation of detached antennas may be needed when this occurs.

Detection rates of PIT tagged individuals in previous years provided information on emigration timing and environmental variables linked to emigration. Additional tagged *O. mykiss* in Phase 2 Continued and operation of the PIT tag arrays will provide larger sample sizes to inform downstream trapping efficiency and implementation.
This task includes three sub-tasks:

1) Data download – PIT antennas are in operation throughout the year. During the migration window (December-June) sites will be visited at least twice per month, with additional visits before and after high flow events, as feasible. Additionally, within this subtask is data download training for technicians.
2) Antenna range testing and antenna tuning will occur at least once per month during the data downloads.
3) Antenna re-installation and repair may be necessary if bed-mobilizing flows are experienced.

Deliverables
These data will be compiled into the yearly report summary under the Phase 2 Continued Scope of Work part 2

Task 5: Data Management, Analysis, and Reporting

$17,084

Data collected from Tasks 1, 3, and 4 will be entered into databases that combine data collected across all years. After entry, data will go through two complete QA/QC checks for errors. Data collected for Task 1 (fall mark-and-recapture) will be summarized in a memo

Deliverables
Memo summarizing the fall mark-and-recapture study from Task 1.

Task 6: Project Management

$14,872

Coordinating project activities requires frequent communication among multiple study participants including United, CFS and resource agencies, among others to ensure that all parties are aware of project plans and progress. Towards this aim, CFS team members will: 1) coordinate project activities, 2) provide regular updates to United staff, and 3) prepare monthly invoices and cover letters that detail activity and time spent on this project.

Deliverables

Below, we list the deliverables associated with this scope of work and the date.

Task	Deliverable	Completion date
Task 1: Mark and Recapture Study	Fall mark-recapture study technical memo	31 January 2022
Task 3: Emigrant trap install, training and removal	Trap installation	By 15 December 2021
Task 3: Emigrant trap install, training and removal	Trap removal	By 30 June 2022

Budget

CFS will work with United to meet all project objectives on schedule and on budget. We estimate the total cost of Phase 2 Continued part 1 to be $**440,950**. Budget assumptions and details are provided below.

Budget Assumptions

The following assumptions were used to develop the budget:

1) Work and associated deliverables completed after 30 June 2022 has been moved to a separate Phase 2 Continued part 2 budget.
2) United-CFS meetings will require remote participation and meeting duration will not exceed 1 hour.
3) United-CFS meetings will be conducted remotely via video conference or telephone once every two months between October 2021 and May 2022.
4) CFS will provide personnel for field sampling and equipment installations.
5) CFS assumes a water year type that is neither extremely wet nor extremely dry. An extreme water year type may affect our ability to operate traps effectively and impact data collection efforts.
6) CFS assumes that current CDC guidelines on social distancing and other measures to prevent the spread of COVID-19 may change which could require additional travel and mileage expenses.
7) CFS will draft all permitting reports and applications for United's review and approval. CFS will also support United in communicating/coordinating with resource agencies regarding the studies and required permits. United will be responsible for submitting permit applications/permit required reports and communicating with resource agencies.
8) CFS will provide additional experienced staff to supplement local staff in response to up to three major flow events or during periods of high emigration rates.
9) CFS will travel to project site for field sampling.
10) Standard 2021 U.S. General Service Administration (GSA) rates for mileage, lodging, and meals were applied to travel costs associated with field sampling.
11) A personal gear rental fee of $150 per week per person has been added for crew using their own camping equipment during the mark-and-recapture surveys.

12) CFS assumes that captured *O. mykiss* will be released within middle Piru Creek and not transported to lower Piru Creek for experimental release. If *O. mykiss* are to be experimentally released into lower Piru Creek, additional funding may be required to expand current experimental release protocol drafts and for the releases themselves.

13) PIT antennas will require repairs in response to up to one major flow event in the study year. Additional flow events that disrupt or dislodge equipment or (e.g., outside of typical maintenance) may result in further incurred costs.

If the assumptions listed above are not met, this may result in changes to the project schedule, scope, and deliverables detailed in this proposal. Additional collaboration, site-visits, meetings, or tasks beyond the scope of this proposal would be budgeted on a per-task basis, as needed.

Cramer Fish Sciences
3300 Industrial Blvd # 100,
West Sacramento, CA 95691
(916)-231-1681
www.fishsciences.net

SFD Fish Passage Program: Phase 2 Continued (1 October 2021 - 30 June 2022) Study Scope for Juvenile Downstream Passage Pre-Implementation Studies

	Projected Hours										
	$235.00 Principal Scientist	$183.00 Sr. Scientist	$138.00 Sr. Biologist	$103.00 Biologist I	$80.00 Senior Bio Technician	$64.00 Bio Technician	Labor Subtotal	Travel	Direct	Misc.	Totals
Objectives and Tasks											
Task 1: Mark-and-Recapture Study											
Task 1.1 Fall electrofishing (Nov. 2021)	2		150	120	250	600	$91,930	$15,000		$2,400	$109,330
Task 1.2 Spring electrofishing (March 2022)	2		100		100	500	$54,270	$10,000		$1,800	$66,070
Task 1.3 Scale sample preparation			2	15		150	$11,421			$100	$11,521
Task 1.4 Genetic tissue preparation			2			40	$2,836				$2,836
Task 1 Subtotal	4		254	135	350	1,290	$160,457	$25,000		$4,300	$189,757
Task 2: Emigrant Trap Installation, Training, and Removal											
Task 2.1 Pre-install site visit and prep (Nov. 2021)	1		15			15	$3,265				$3,265
Task 2.2 Trap (RST and fyke) installation (Dec. 2021)			40		50	100	$15,920	$4,000		$1,200	$21,120
Task 2.3 Field crew training (Dec. 2021)	24		40				$11,160				$11,160
Task 2.4 Trap removal and storage (June 2022)				40		120	$11,800	$3,000			$14,800
Task 2 Subtotal	25		95	40	50	235	$42,145	$7,000		$1,200	$50,345
Task 3: Emigrants Trap Monitoring and Efficiency Studies											
Task 3.1 Daily fyke/rotary screw trap checks (Dec 2021 - June 2022)	4		25	25		1,600	$109,365	$3,000		$500	$112,865
Task 3.2 High flow/debris trap adjustments	4		30	30	80	160	$24,810	$3,000			$27,810
Task 3.3 Conduct Efficiency and flow tests	4		20	10		45	$7,610				$7,610
Task 3 Subtotal	12		75	65	80	1,805	$141,785	$6,000		$500	$148,285
Task 4: PIT tag Array Operation and Maintenance											
Task 4.1 Data Download and training			20			35	$5,000	$800			$5,800
Task 4.2 Antenna tag capture efficiency and antenna tuning			12			30	$3,576	$800			$4,376
Task 4.3 Antenna re-installation and repair			12	25		50	$7,431	$3,000			$10,431
Task 4 Subtotal			44			115	$16,007	$4,600			$20,607
Task 5: Data Management, Analysis, and Reporting											
Task 5.1 Data management and QC			15	10		80	$8,220				$8,220
Task 5.2 Data summary and analysis	4	4	20				$4,432				$4,432
Task 5.3 Data summary report	4	4	20				$4,432				$4,432
Task 5 Subtotal	8	8	55			80	$17,084				$17,084
Task 6: Project Management											
Task 6.1 Coordinate field activities			40	10			$6,550				$6,550
Task 6.2 Communications with client	8	4	16				$4,820				$4,820
Task 6.3 Monthly invoice review	2		12				$2,126				$2,126
Task 6.4 Permit reporting and support			4	8			$1,376				$1,376
Task 6 Subtotal	10	4	72	18			$14,872				$14,872
Total Project Hours	59	12	595	258	480	3,525					
Total Project Costs	**$13,865**	**$2,196**	**$82,110**	**$26,574**	**$38,400**	**$225,600**	**$392,350**	**$42,600**	**$0**	**$6,000**	**$440,950**