

AGENDA
ENGINEERING and OPERATIONS COMMITTEE MEETING
Thursday, May 4, 2023, at 9:00 a.m.
UWCD Headquarters, First Floor, Board Room
1701 N. Lombard Street, Oxnard, CA 93030

CALL TO ORDER – OPEN SESSION 9:00 a.m.

Committee Members Roll Call

1. Public Comment

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 April 6, 2023, Engineering and Operations Committee meeting.

3. May 17, 2023, Board Meeting Motion Agenda Item

The Committee will review and discuss the following agenda item to be considered for approval at the May 17, 2023, Board meeting. The Committee will formulate a recommendation to the entire Board based on its discussions with staff. The Committee will discuss the following item:

3.1 Authorize Approval of a Contract with GEI Consultants, Inc. to Develop the Final Design Phase of the Santa Felicia Dam Outlet Works Improvement Project, Prepare Final Bid Documents and Support Bid Phase

(Engineering Department, Dr. Maryam Bral) (Proposed Time: 10 minutes)

The Committee will consider recommending approval of the motion item to the full Board that considers authorizing the General Manager to execute an agreement with GEI Consultants, Inc. (GEI) in the amount of \$867,980.00 to develop the final design phase of the Santa Felicia Dam Outlet Works Improvement Project, prepare final bid documents and support the bid phase.

4. Monthly Department Updates (Proposed Time: 15 minutes per update)

Information Item

The Committee will receive and review the monthly reports from the Engineering, Environmental Services, and Operations and Maintenance Departments as well as receive a verbal presentation of its highlights.

4.1 Engineering Department Update (Dr. Maryam Bral)

4.2 Environmental Services Department Update (Marissa Caringella)

4.3 Operations and Maintenance Department Update (Brian Collins)



5. Future Agenda Items

The Committee will suggest topics or issues for discussion on future agendas.

ADJOURNMENT

Directors:

Chair Lynn E. Maulhardt
Catherine P. Keeling
Daniel C. Naumann

Staff:

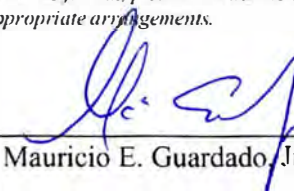
Mauricio E. Guardado, Jr.
Anthony Emmert
Marissa Caringella
Hannah Garcia-Wickstrum
Evan Lashly
Tessa Lenz
Randall McInvale

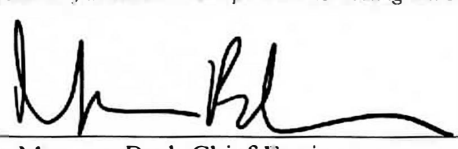
Dr. Maryam Bral
Brian Collins
John Carman
Jackie Lozano
Vanessa Vasquez

Craig Morgan
Michel Kadah
Adrian Quiroz
Robert Richardson

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, or if you require agenda material in an alternative format, please contact the District's offices 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) April 28, 2023

(time) 3:00 p.m.

(attest) Vanessa Vasquez

At: www.unitedwater.org

Posted: (date) April 28, 2023

(time) 3:10 p.m.

(attest) Vanessa Vasquez

At: United Water Conservation District Headquarters, 1701 N. Lombard Street, Oxnard CA 93030



Board of Directors
Bruce E. Dandy, President
Sheldon G. Berger, Vice President
Lynn E. Maulhardt, Secretary/Treasurer
Mohammed A. Hasan
Catherine P. Keeling
Gordon Kimball
Daniel C. Naumann

General Manager
Mauricio E. Guardado, Jr.

Legal Counsel
David D. Boyer

MINUTES
ENGINEERING and OPERATIONS
COMMITTEE MEETING
Thursday, April 6, 2023, at 9:00 a.m.
UWCD Headquarters, First Floor, Board Room
1701 N. Lombard Street, Oxnard, CA 93030

COMMITTEE MEMBERS IN ATTENDANCE

Lynn E. Maulhardt, chair
Catherine P. Keeling, director
Daniel C. Naumann, director

STAFF IN ATTENDANCE

Dr. Maryam Bral, chief engineer
Marissa Caringella, environmental services manager
John Carman, operations and maintenance supervisor
Brian Collins, chief operations officer
Hannah Garcia-Wickstrum, associate environmental scientist
Tessa Lenz, environmental scientist regulatory affairs
Jackie Lozano, administrative assistant
Craig Morgan, engineering manager
Zachary Plummer, technology systems manager
Linda Purpus, environmental services manager
Ed Reese, technology systems specialist
Robert Richardson, senior engineer
Vanessa Vasquez, administrative assistant
Brian Zahn, chief financial officer

PUBLIC IN ATTENDANCE

One member of the public was in attendance.

Call to Order – Open Session

Chair Lynn Maulhardt called the committee meeting to order at 9:00 a.m. The clerk of the Committee called roll. All Committee members were present (Keeling, Maulhardt, Naumann).

1. Public Comments

Information Item

Chair Maulhardt asked for public comment. There were none offered.

2. Approval of Minutes

Motion

Motion to approve the minutes from the March 2, 2023, Engineering and Operations Committee meeting, Director Naumann; Seconded by Director Maulhardt. Voice vote: three ayes (Maulhardt, Keeling, Naumann); none opposed. Motion carries 3/0.



3. April 12, 2023, Board Meeting Motion Agenda Items

The Committee reviewed and discussed the following motion item for the April 12, 2023, UWCD Board of Directors meeting to formulate a recommendation:

3.1 Authorize Approval of the OH Well Replacement Program – El Rio Water Well No. 20 Construction Contract in the Amount of \$849,283.00

Engineering Manager Craig Morgan presented Motion 3.1 to the Committee (presentation attached). The contract would authorize the General Manager to execute a contract with Bakersfield Well and Pump in the amount of \$849,283. This would allow for the replacement of Well No. 5. The contractor has done previous work for the district and successfully replaced Well No. 18. Two other bids were received from Best Drilling and Pump and Christenson. Best Drilling and Pump has also done work for the District with the replacement of Well No. 19, but the bid has since doubled. Director Naumann suggested that investing in quality for long-term use should be considered when selecting a contractor and referenced Well No. 5 installed in the 1950's still standing 20 years later. Craig assured director Naumann that stainless steel for long-term use is being considered and that QA/QC was priority when selecting workmanship.

No further comments or questions were offered by the Committee members. No public comments or questions offered. The Committee members were all in favor of recommending approval of this motion to the full Board.

4. Monthly Department Updates

Information Item

The Committee received and reviewed the monthly reports from the Engineering, Environmental Services, and Operations and Maintenance Departments as well as received a verbal presentation of its highlights (presentations are attached).

4.1 Engineering Department Update

Chief Engineer Dr. Maryam Bral presented engineering highlights covering the Santa Felicia Dam Safety Improvement Project, Santa Felicia Dam Safety Regulatory Compliance, Iron and Manganese Treatment Facility, Extraction Barrier and Brackish Water Treatment Project and Public Outreach. Director Naumann asked if there was a list of items NMFS is requesting (referencing slide two Santa Felicia Dam Safety Improvement Project). Dr. Bral stated that these were recommendations and not requirements. FERC's legal counsel will be asking NMFS for a list of their recommendations and a follow-up meeting is currently being scheduled.

Dr. Bral continued with her presentation and when discussing the upcoming OLDCC Audit/Site Tour on April 19 (slide 5, Iron and Manganese Facility), the Committee Directors nodded in approval. She also provided updates on Iron and Manganese mentioning construction which is to be completed in July 2023. She also reported that for the Extraction Barrier and Brackish Water Treatment Project, the State Water



Resources Control Board selected that project for grant funding in the amount of \$8.4 million. Continuing, she stated that a draft Memorandum of Agreement in partnership with the Navy is currently under review with the District's legal counsel.

Chair Maulhardt diverted the conversation to provide insight from talking to current visitors of our District facilities tours. He stated the outreach is paying the District great dividends. The message he relayed is that it has been enjoyable to watch staff do what they do best. He commented "hats off to all staff in every area and the others involved in this outreach" and stated it has been breathtaking to watch. During one of the tours, he recalled a memory from 1954 when he was standing next to his father looking at a road near Santa Felicia Dam at the age of six. He stressed the importance of everything staff does and how it should be considered part of everyone's heritage as it is certainly part of his. Director Naumann added, the mayor of Ventura provided great feedback and offered his support during his most recent visit. Visitors on the tour were not only amazed by the amount of water in the lake but impressed by the maintenance and the huge undertaking going into clearing out debris from the lake organized by District staff. Chair Maulhardt addressed everyone in the room and stated that this business is ours as a whole and referred to everyone as the movers and doers of this generation. Director Naumann made a comment that he would like to know how the transportation of massive amounts of sediment will be illustrated to the public.

No further Comments or questions from the Committee. No comments or questions were offered by the public.

4.2 Environmental Services Department Update

Environmental Services Manager Marissa Caringella presented on Freeman Operations, activities in response to the Lake Piru Santa Felicia Dam spill, and the Clean Water Act permit activities for work being done at Lake Piru. The Committee welcomed Ms. Caringella who joined the District in March 2023.

At the conclusion of Ms. Caringella's presentation, Chair Maulhardt responded with a job well done. He added, the District is committed to its responsibility to the environment which is built into the District's mission statement and environmental compliance initiatives. Referring to staff, he said he views them as leading, highly educated, and focused on being environmentally responsible. He added that Ms. Caringella will do a marvelous job and has the Committee's full support.

No further Comments or questions from the Committee. No comments or questions were offered by the public.

4.3 Operations and Maintenance Department Update



Chief Operations Officer Brian Collins presented on Operations and Maintenance Department Updates and covered Santa Felicia Dam (SFD) Lake Spill and Storm Cleanup, Freeman Diversion and OH Delivery.

While presenting, Mr. Collins brought to the Committee members' attention that the SFD Lake Piru Spill and Storm Cleanup photo date should be changed from February 16, 2023, to February to March 16, 2023.

Director Naumann shared his excitement of the debris cleanup. Additionally, Chair Maulhardt shared feedback from individuals on how they had no idea how much material could accumulate on the lake. He explained that people were pleased to hear that FEMA would support the debris cleanup effort. Director Naumann appreciated the fact that District staff were proactive in securing emergency disaster grant funding.

Chair Maulhardt stated that due to volume of water when the riverbed is dropped to a point a perfect example of sediment is exposed underneath. He expressed that it may be worthwhile to document this in photographs and requested closer images of the sediment by O&M Program Supervisor John Carman. Director Naumann added, having a time lapse showing the direction of water flow exposing layers of sediment would be a nice story to tell. Mr. Collins continued the conversation by stating the District has a contract with NHC (Northwest Hydraulic Consultants, who are performing a geomorphic study). Chair Maulhardt offered, modeling this sediment is an opportunity to make a huge historical footnote.

Chair Maulhardt spoke about the problematic hillside that continues to be an issue especially with current rainy weather conditions (slide 6, Freeman Diversion Canal and Saticoy Fire). District staff had considered putting up brick walls and discussed how the canal should have been moved over when built. This is an ongoing issue that the Board is fully aware of.

There was also discussion among the Committee and District staff regarding the water being diverted to El Rio and Saticoy ponds.

The Committee recommended the following be presented to the Board: Engineering Department expenditures on motion items should be highlighted (referencing Motion Item 3.1), the chart that is invaluable would be the one with arrows and timelines (referencing Engineering Department Monthly Update slide 8) and details for all the meetings could be excluded; Environmental Services Department, going through all the topics would be a good experience for the new Environmental Services Manager and would help the Board familiarize themselves with her; and Operations and Maintenance, the Committee would like to see the presentation condensed. Director Keeling continued by requesting a side-by-side comparison of Lake Piru depicting when water was low. Director Naumann added for staff to report on how much water is in Castaic and how the District will address Article 21. Prior to this recommendation,



Mr. Collins provided an update on the tornado incident that occurred in Iowa where one of their facilities and the District model was destroyed.

Continuing, the Committee members also requested to see that the District facility tours continue and encouraged staff to bring forward recommendations on who should be invited to tour.

For the Committee's information, Mr. Collins mentioned he and Mr. Morgan are traveling to Denver and will not be present for the April 12 Board meeting. Dr. Bral will present Motion 3.1 on behalf of Mr. Morgan and Mr. Carmen will present O&M updates on behalf of Mr. Collins. At the conclusion of Mr. Collins' presentation, Director Keeling inquired on the well-being of staff impacted from the tornado and offered the District's support. Mr. Collins responded that there were no personnel onsite when the tornado touched down.

5. Future Agenda Items

Chair Maulhardt polled the Committee members of any agenda items they would like to see at a future Committee meeting. None were offered.

ADJOURNMENT 10:04 a.m.

Chair Maulhardt adjourned the meeting at 10:04 a.m.

I certify that the above is a true and correct copy of the minutes of the Engineering and Operations Committee Meeting held on April 6, 2023.

ATTEST: _____
Chair Lynn E. Maulhardt


El Rio Well Replacement Program
Water Well No. 20 Construction Project

Bid Results:

Bakersfield Well and Pump: \$849,283

Best Drilling and Pump: \$953,000


Layne Christensen Co: \$1,144,670.08

4/27/2023

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ENGINEERING DEPARTMENT
MONTHLY UPDATE

April 6, 2023

4/27/2023



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Santa Felicia Dam Safety Improvement Project

In preparation for Outlet Works Construction Phase:

- Released RFP/Q for CM and Inspection Services for the Outlet Works
- Provided a tour of SFD was to potential proposers and written responses to proposers' questions
- Met with FERC to discuss IRRMs
- Preparing responses to NMFS and FERC comments on the draft BA





4/27/2023

Santa Felicia Dam Safety Regulatory Compliance



Fernandeño Tataviam Band of Mission Indians supported Staff with the content on Tataviam people's lifestyle.

NATURAL AND CULTURAL RESOURCES

Traditional Home of the Tataviam People
Before the construction of Santa Felicia Dam on Piru Creek, the area around what is now Lake Piru was originally inhabited by the Fernandeño Tataviam Band of Mission Indians, while the Ventureño Chumash traditionally occupied land to the west. Several Tataviam villages are known to exist in and around the area now known as Piru, and the creek would have provided a critical source of fresh water. The Tataviam practiced hunting and gathering for food, and subsisted on small game and local vegetation, including yucca, juniper berries, sage seeds, and acorns from the oak woodlands still seen around Lake Piru. The word "Piru" means "tule," a versatile reed that was used to make houses, clothing, mats, baskets, and tools, and is common along Piru Creek, highlighting the importance of the creek and surrounding area to the Tataviam people.





LAKE PIRU
RECREATION AREA



4/27/2023

Santa Felicia Dam Safety Regulatory Compliance



Santa Felicia Dam spill began on March 16, 2023. Staff provided regular updates to:

- FERC
- Cal OES
- Army Corp
- Ventura County Office of Emergency Services

4/27/2023

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5

Iron and Manganese Treatment Facility



➤ DOD OLDCC Audit/
Site Tour on April 19

4/27/2023

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Iron and Manganese Treatment Facility



Overview of filter vessels



Overview of construction site



4/27/2023

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Extraction Barrier and Brackish Water Treatment Project

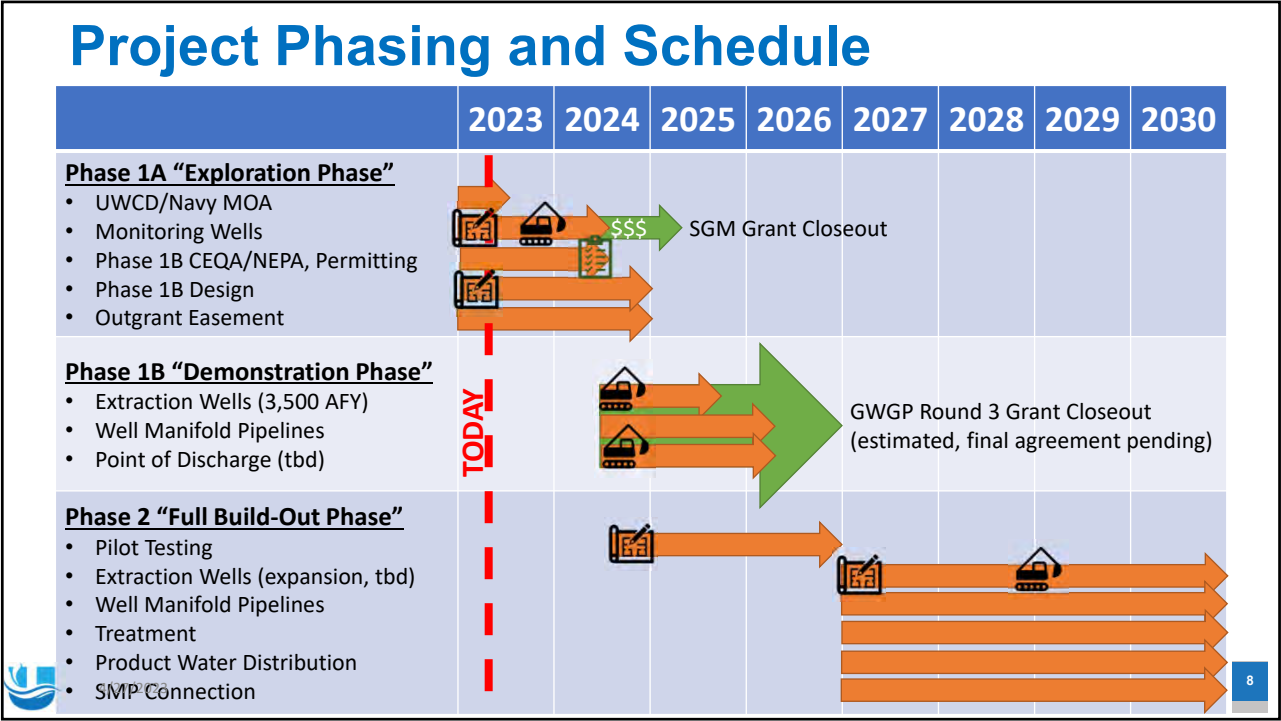
- Received a notification from SWRCB selection of EBB Water for Prop 1 GWGP R3 Grant funding in the amount of **\$8.4 million** in support of EBB Water – Phase 1B
- Draft MOA was completed in collaboration with the Navy, currently under legal review
- KJ submitted Draft Discharge Alternatives TM for staff review - comments due on April 10



4/27/2023

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Public Outreach

- March 29 – at El Rio Fe/Mn Treatment Facility Project as part of District Open House and Facilities

- March 15- Mauricio and Robert attended meeting with LAFCO

- March 23 - Eng/ WR/ ESD Staff toured the Charles E. Meyer Desalination Plant in Santa Barbara

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QUESTIONS



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11



Santa Felicia Dam Spillway– March 16, 2023

ENVIRONMENTAL SERVICES DEPARTMENT
MONTHLY UPDATE

April 6, 2023



 **United Water**
CONSERVATION DISTRICT

12

Department
Summary Updates

• Freeman operations support

• Activities initiated in response to Lake Piru spill

- Lower system quagga mussel monitoring

• Clean Water Act permits for maintenance activities at Lake Piru

• Clean Water Act permits for emergency work in Reasoner Creek



Freeman Diversion – March 2023



Reasoner Creek Emergency Work – March 28, 2023

13



Santa Felicia Dam spillway bridge
March 22, 2023

Photo credit: John Carman

QUESTIONS ?



3

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3-22-23

OPERATIONS AND MAINTENANCE DEPARTMENT MONTHLY UPDATE


April 6, 2023




15

Lake Piru Spilling Since 3-16-23

"First Spill in 17 Years"



1000 cfs 3-22-23



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16

Santa Felicia Dam

Lake Spill / Storm Cleanup



2-16-23 Lake Piru Spill



3-8-23 East Rd. Erosion



Juan Fernandez Cleanup



2-22-23 Lower Access Challenges



3

Freeman Diversion

Fish Wiper Gearbox – Recharge Basin Discing – Sediment Management



3-28-23 Fish Wiper Gearbox



3-28-23 Saltcoy "A" Recharge Basin





3-21-23 Canal Sediment



4/27/2023

4

Freeman Diversion

Sediment Management



3-29-23 screen cleaning



3-29-23 Vac Truck sediment removal





4/27/2023

5

Freeman Diversion

Canal Slide — Saticoy Fire



3-15-23 Saticoy Canal Slide



3-14-23 Transformer Fire




4/27/2023

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OH Delivery


OH Well #12 - Gas Engine #4 Manifold - Disinfection Room Exhaust Fan




3-27-23 OH Well 12



3-30-23 El Rio Booster Plant

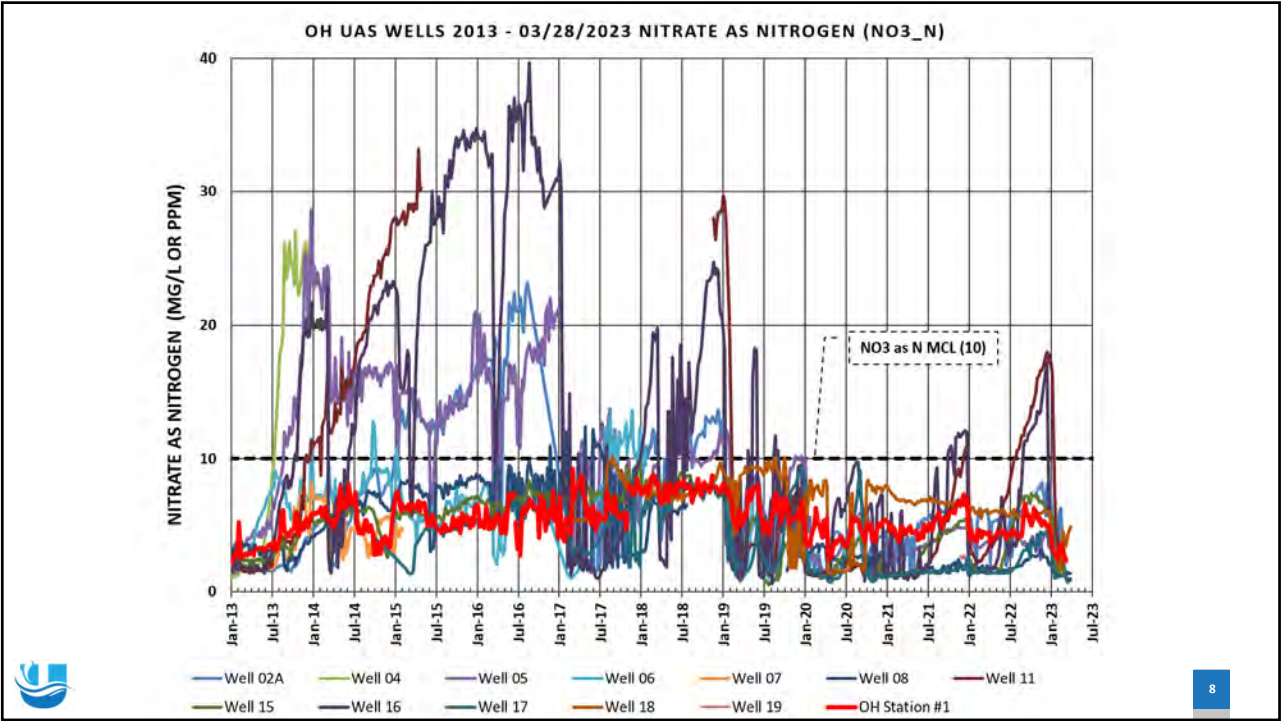


3-24-23 El Rio Booster Plant



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Questions?

 4/27/2023

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Staff Report

To: Engineering and Operations Committee Members

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

From: Dr. Maryam Bral, Chief Engineer
Michel Kadah, Engineer

Date: April 28, 2023 (May 4, 2023, Committee Meeting)

Agenda Item: 3.1 Authorize Approval of a Contract with GEI Consultants, Inc. to Develop the Final Design Phase of the Santa Felicia Dam Outlet Works Improvement Project, Prepare Final Bid Documents and Support Bid Phase
Board Motion

Staff Recommendation:

The Committee will consider recommending approval of the motion item to the full Board that considers authorizing the General Manager to execute an agreement with GEI Consultants, Inc. (GEI) in the amount of \$867,980.00 to develop the final design phase of the Santa Felicia Dam Outlet Works Improvement Project, prepare final bid documents and support the bid phase.

Background:

The existing outlet works system needs to be replaced due to concerns related to seismic stability of the intake tower and water conveyance conduit through the dam and the ongoing accumulation of sediment in the reservoir that could potentially impact operation of the outlet works soon. The existing outlet works will be relocated to the east (left) abutment and replaced with a new outlet works facility which will consist of an intake control facility, including a sloping intake located in the reservoir, two water conveyance conduits in a new tunnel through, a downstream control facility (DCF), and a hydropower facility consisting of a small cross-follow turbine located within the DCF. The design of the Santa Felicia Dam Outlet Works Improvement Project (Project) has advanced to the 90% phase. Under an existing contract, GEI will complete the 90% design documents by early June 2023 and presented the design outcomes to the Board of Consultants (BOC), Federal Energy Regulatory Commission (FERC), and the California Department of Water Resources Division of Safety of Dams (DSOD) at the BOC meeting No. 7 on June 21-22, 2023. Staff expects to receive the BOC approval of the 90 percent design documents along with their recommendations to proceed with the final design phase at the completion of the BOC meeting No. 7.

Discussion:

During the final design (100% design), GEI will update the geotechnical, structural, hydraulic, site civil, and hydropower analyses, and finalize the technical specifications, design drawings,

Agenda Item: 3.1 Authorize Approval of a Contract with GEI Consultants, Inc. to Develop the Final Design Phase of the Santa Felicia Dam Outlet Works Improvement Project, Prepare Final Bid Documents and Support Bid Phase
Board Motion

constructability evaluation, reservoir operation plan and the project estimated cost. Staff will submit the 100% design packet to the BOC, FERC and DSOD by the end of October 2023. The design findings will be presented at the BOC meeting No. 8 scheduled for November 2023.

Following the completion of the final design, GEI will prepare the final bid documents, including the bidding forms, bid schedule, District general provisions, applicable special provisions, and measurement and payment sections. The notice inviting bids for construction of the Project is anticipated to be advertised in March 2024. GEI's support services during the bid phase include preparation of responses to interested contractors' requests for information pertained to the project design, addenda items to clarify technical questions, and of conformed plans and specifications.

Staff recommends execution of the contract with GEI. A copy of the Professional Consulting Service Agreement detailing GEI's complete proposal, including the scope of work and deliverables, proposed fee, and the project schedule, is included in Attachment A.

Fiscal Impact:

Sufficient funds to cover the proposed contract amount of \$867,980.00 are included in the Fiscal Year 2023/24 budget (Account No. 051-400-81080-8002-815).

Attachment:

Attachment A – Santa Felicia Dam Outlet Works Improvement Project – Final Design
Professional Services Agreement with GEI Consultants, Inc.

AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

THIS AGREEMENT (“Agreement”) is made and entered into on _____, 2023, by and between the **United Water Conservation District**, Ventura County, California, (hereinafter “**UNITED**”), and **GEI Consultants, Inc.** (hereinafter “**CONSULTANT**”).

RECITALS:

WHEREAS, UNITED desires to obtain professional engineering consultation services in connection with the development of final design documents, prepare final bid documents, and support bid phase for the **Santa Felicia Dam Outlet Works Improvement Project** (“Project”); and

WHEREAS, UNITED has selected CONSULTANT to provide such services; and

WHEREAS, CONSULTANT represents that it has the skills, experience, license, and expertise to perform these professional services for UNITED; and

WHEREAS, UNITED is desirous of engaging the services of CONSULTANT to perform these services;

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

1. EMPLOYMENT

A. UNITED hereby employs CONSULTANT to perform and complete the professional engineering services as set forth in Exhibit “A” (“Scope of Work/Schedule of Charges”). CONSULTANT shall perform such professional services as set forth in Exhibit “A” and shall furnish or procure the use of incidental services, equipment, and facilities reasonably necessary for the completion of services.

B. Any extra work over and above that included in the Scope of Work included in Exhibit “A” shall be in compliance with Section 3D.

C. CONSULTANT represents that its services shall be performed, within the limits prescribed by UNITED, in a manner consistent with the level of care and skill ordinarily exercised by other engineering professionals under similar circumstances at the time and in the vicinity its services are performed.

D. **Thomas O. Keller** shall: (a) personally perform or supervise the performance of services on a day-to-day basis on behalf of CONSULTANT; and (b)

maintain direct communication with UNITED's **Chief Engineer, Maryam A. Bral** or designee in the performance of CONSULTANT's services.

E. CONSULTANT in the performance of services hereunder shall fully comply with any and all local, state and federal laws, regulations, ordinances, and policies applicable to its work, including any licensing laws applicable to CONSULTANT's profession and anti-discrimination laws pertaining to employment practices.

F. In the event of any conflict between the terms and conditions set forth in Exhibit A (Scope of Work/Schedule of Charges) versus those terms and conditions set forth in this Agreement, the terms and conditions set forth in this Agreement shall govern and the conflicting terms and conditions in Exhibit A shall not apply.

2. TERM OF AGREEMENT

Unless otherwise earlier terminated as specified in Section 8, this Agreement shall commence on the date set forth above and shall expire on **July 15, 2024**.

3. COMPENSATION

Payment by UNITED for the consulting services shall be considered as full compensation for all personnel, materials, supplies, and equipment used in carrying out the work.

A. Compensation and payments to the CONSULTANT shall be as described below:

1. UNITED shall compensate CONSULTANT on a time and expenses basis not to exceed **eight hundred sixty seven thousand and nine hundred eighty dollars (\$867,980.00)** for performing all services authorized and required by this Agreement and specified in Exhibit "A." UNITED shall compensate CONSULTANT only for actual costs incurred on a time and expenses basis, but in no event shall the total compensation be greater than the not to exceed amount above. However, the total amount paid on a time and expenses basis may be lower than the not to exceed amount above based on actual costs incurred. Payment shall be made in accordance with CONSULTANT's Schedule of Charges submitted to UNITED, included in Exhibit "A" attached and incorporated by reference herein.

2. CONSULTANT shall provide UNITED with monthly itemized invoices. Invoices shall include the categories and identities of CONSULTANT's employees performing services, a description of the services, the number of hours spent performing services, the hourly rate for each employee, CONSULTANT's actual costs and expenses, and the total amount of compensation requested by CONSULTANT for that month. Upon UNITED's request, CONSULTANT shall include with its monthly invoices a detailed verification, including accounting

records, of the work actually performed and costs and expenses incurred, along with any other documents or information reasonably requested by UNITED.

B. UNITED shall pay CONSULTANT within thirty (30) days after receipt of CONSULTANT's invoices, with the exception of any disputed amounts which shall be withheld until resolution of the dispute. If UNITED has reasonable grounds to believe that CONSULTANT will be unable to materially perform the services under this Agreement, or there exists or may exist a claim against CONSULTANT arising out of CONSULTANT's negligence or intentional acts, errors, omissions, or material breach of any provision of this Agreement, then UNITED may withhold payment of any reasonable amount due to CONSULTANT which is directly related to such negligence, intentional act, error, omission or material breach. No payment made under this Agreement shall be conclusive evidence of CONSULTANT's performance of the Agreement, either wholly or in part, and no payment shall be construed to be an acceptance by UNITED of CONSULTANT's work.

C. CONSULTANT shall notify UNITED in writing of the need for additional services required due to the circumstances beyond the CONSULTANT's control ("Additional Services"). The CONSULTANT shall obtain written authorization from UNITED before rendering any Additional Services. Compensation for all approved Additional Services shall be negotiated and approved in writing by UNITED before such Additional Services are performed by CONSULTANT. No compensation shall be paid to the CONSULTANT for any Additional Services that are not previously approved by UNITED in writing.

D. Reimbursable expenses, if applicable, are in addition to compensation for services outlined in the Scope of Work and Additional Services, and shall be paid to the CONSULTANT in accordance with the guidelines specified on Exhibit "B". Reimbursable expenses are paid at the actual costs, without mark-ups, incurred by the CONSULTANT and the CONSULTANT's employees in conduct of Agreement activities.

4. SCHEDULE OF WORK

CONSULTANT shall complete and deliver services and deliverables to UNITED in a diligent and professional manner, in accordance with the Project schedule set forth in Exhibit "A" attached and incorporated by reference herein. Time is of the essence in CONSULTANT's performance of services hereunder.

CONSULTANT's Project Manager shall keep UNITED's **Chief Engineer, Maryam A. Bral**, or designee informed as to the progress of work by informal reports. Neither party shall hold the other responsible for damages or delay in performance caused by acts of God, strikes, lockouts, accidents, or other events beyond the reasonable control of the other or the other's employees and agents.

5. ASSIGNMENT OF CONTRACT

This Agreement is a professional services contract. CONSULTANT shall not assign this Agreement or any portion of the work without the prior written approval of UNITED. Any such assignment without UNITED's prior written approval shall be void. UNITED may withhold such approval for any reason in its sole discretion.

6. INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT agrees to indemnify and hold UNITED entirely harmless from all liability arising out of:

1. Workers' Compensation and Employer's Liability. Any and all claims under Workers' Compensation acts and other employee benefit acts with respect to CONSULTANT's employees or CONSULTANT's subconsultant's employees arising out of CONSULTANT's work under this Agreement; and

2. General Liability. To the extent arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of the CONSULTANT, the CONSULTANT shall indemnify, defend and hold UNITED harmless from any liability for damages for (1) death or bodily injury to person; (2) injury to, loss or theft of property; (3) any failure or alleged failure to comply with any provision of law; or (4) any other loss, damage or expense arising under either (1), (2), or (3) above, sustained by the CONSULTANT or UNITED, or any person, firm or corporation employed by the CONSULTANT or UNITED upon or in connection with the Project, except for liability resulting from the sole or active negligence, or willful misconduct of UNITED, its officers, employees, agents, or independent consultants who are directly employed by UNITED. The CONSULTANT, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings (other than professional negligence covered by Section A3 below) that may be brought or instituted against UNITED, its officers, agents, or employees, to the extent such claims, actions, suits, or other proceedings arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, and shall pay or satisfy any judgment that may be rendered against UNITED, its officers, agents, or employees, in any action, suit or other proceedings as a result thereof. Any costs to defend under this Section A2 shall not exceed the CONSULTANT's proportionate percentage of fault; and

3. Professional Liability. To the extent arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of the CONSULTANT, the CONSULTANT shall indemnify and hold UNITED harmless from any loss, injury to, death of persons, or damage to property caused by any act, neglect, default, or omission of the CONSULTANT, or any person, firm, or corporation employed by the CONSULTANT, either directly or by independent contract, including all damages due to loss or theft, sustained by any person, firm, or

corporation, including UNITED, arising out of, or in any way connected with, the Project, including injury or damage either on or off UNITED property; but not for any loss, injury, death, or damages caused by sole or active negligence, or willful misconduct of UNITED. With regard to the CONSULTANT's obligation to indemnify for acts of professional negligence, such obligation does not include the obligation to provide defense counsel or to pay for the defense of actions or proceedings brought against UNITED, but rather to reimburse UNITED for attorneys' fees and costs incurred by UNITED in defending such actions or proceedings brought against UNITED, and such fees and costs shall not exceed the CONSULTANT's proportionate percentage of fault.

7. INSURANCE

A. CONSULTANT shall procure and maintain for the duration of this Agreement, and for injuries which occur and claims which are made after the services herein are provided, insurance policies in accordance with the requirements set forth in Exhibit "C" attached and incorporated by reference herein. CONSULTANT shall also provide UNITED with a certificate of insurance attesting to its professional liability (errors and omissions) coverage and all required additional insured endorsements.

B. Submission of insurance certificates or endorsements or other proof of insurance shall not relieve CONSULTANT from liability under the indemnification provisions of Section 6. CONSULTANT's obligations in accordance with Section 6 shall apply whether or not such insurance policies shall have been determined to apply to any of such claims, damage, lawsuits, losses or liabilities covered by Section 6.

C. By its signature hereto, CONSULTANT certifies that it is aware of the provisions of California Labor Code Section 3700 which requires every employer to be insured against liability for workers compensation' or to undertake self-insurance as specified. CONSULTANT shall comply with these provisions before commencing work under this Agreement.

8. TERMINATION OF AGREEMENT

A. Termination for Cause

1. UNITED may terminate CONSULTANT's services for cause, whereupon this Agreement shall terminate immediately. Termination may occur regardless of whether CONSULTANT's services are completed. Any termination or special instructions from UNITED shall be made in writing.

2. Termination for cause may occur upon any of the following events: (a) CONSULTANT's material breach of this Agreement; (b) abandonment or lack of diligence in performance of the work by CONSULTANT; (c) cessation, suspension,

revocation or expiration of any license needed by CONSULTANT to provide services hereunder; (d) failure of CONSULTANT to substantially comply with any local, state or federal laws, regulations, ordinances or policies applicable to its work hereunder; (e) filing by or against CONSULTANT of bankruptcy or any petition under any law for relief of debtors; or (f) conviction of CONSULTANT or its principal representative or personnel for any crime other than minor traffic offenses.

3. Subject to the provisions of Section 3.B herein, CONSULTANT shall be paid for all approved services performed and approved expenses incurred to the date of termination for cause supported by documentary evidence, including payroll records and expense reports, up to the date of the termination. In the event of termination for cause, all damages and costs associated with the termination, including increased consultant and replacement consultant costs, shall be deducted from any payments due to CONSULTANT.

4. In the event a termination for cause is determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience in accordance with Section 8.B below, and CONSULTANT shall have no greater rights than it would have had if a termination for convenience had been effected in the first instance. No other loss, cost, damage, expense or liability may be claimed, requested or recovered by CONSULTANT.

B. Termination Without Cause/For Convenience. This Agreement may be terminated without cause by UNITED or for UNITED's convenience upon fourteen (14) days' written notice to the CONSULTANT. In the event of a termination without cause, UNITED shall pay the CONSULTANT for all approved services performed and all approved expenses incurred under this Agreement supported by documentary evidence, including payroll records and expense reports, up until the date of the notice of termination. In addition, CONSULTANT will be reimbursed for reasonable termination costs through the payment of 3% beyond the sum due the CONSULTANT under this section through 50% completion of the CONSULTANT's portion of the Project and, if 50% completion is reached, payment of 3% of the unpaid balance of the contract to CONSULTANT as termination cost. This 3% is agreed to compensate the CONSULTANT for the unpaid profit CONSULTANT would have made under the Project on the date of termination and is consideration for entry into this termination for convenience clause.

C. In the event of termination with or without cause, CONSULTANT shall promptly provide to UNITED all Project Documents as defined in Section 9 below within five (5) calendar days from the effective date of termination. Failure to provide all Project Documents as required shall be deemed a material breach of this Agreement.

D. In the event of a dispute as to the performance of the work or an interpretation of this Agreement, or payment or nonpayment for work performed or

not performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute CONSULTANT agrees to continue the work diligently to completion. If the dispute is not resolved, CONSULTANT agrees it will neither rescind the Agreement nor stop the progress of work, but CONSULTANT's sole remedy will be to submit such controversy to determination by a court having competent jurisdiction of the dispute as required by this Agreement after the Project has been completed and not before.

9. PROFESSIONAL SERVICES

A. The CONSULTANT is employed to render a professional service(s) only and any payments made to it are compensation solely for such services as it may render and recommendations it may make in the performance of services.

B. All plans, specifications, construction documents, data, records, files, communications, information, reports and/or other documents that are prepared, generated, reproduced, maintained and/or managed by the CONSULTANT or CONSULTANT's subconsultants arising from or in any way related to the services provided under this Agreement (regardless of medium, format, etc.) shall be and remain the property of UNITED ("Project Documents"). UNITED may provide the CONSULTANT with a written request for the return of the Project Documents at any time. Upon CONSULTANT's receipt of UNITED's written request, CONSULTANT shall return the requested Project Documents to UNITED within five (5) calendar days. CONSULTANT may make copies of the work generated. Failure to comply with any such written request above shall be deemed a material breach of this Agreement. Nothing in this paragraph shall be deemed a waiver of any copyright in the Project Documents prepared by the CONSULTANT. Any unauthorized reuse or modification of such Project Documents other than for purposes intended by CONSULTANT or for the Project shall be at UNITED's risk and liability.

C. CONSULTANT agrees that all dealings of the parties under this Agreement shall be confidential and no Project Documents or information developed, prepared or assembled by CONSULTANT under this Agreement, or any information made available to CONSULTANT by UNITED, shall be revealed, disseminated or made available by CONSULTANT to any person or entity other than UNITED without the prior written consent of UNITED, unless otherwise required by subpoena or applicable law or regulatory authority.

10. INDEPENDENT CONTRACTOR RELATIONSHIP

It is expressly understood between the parties that no employee/employer relationship is intended, the relationship of CONSULTANT to UNITED being that of an independent contractor. UNITED shall not be required to make any payroll deductions or provide Worker's Compensation Insurance coverage or health benefits to CONSULTANT. CONSULTANT is solely responsible for selecting the means,

methods and procedures for performing its services hereunder as assigned by the UNITED and for coordinating all portions of the work so the results will be satisfactory to UNITED. CONSULTANT will supply all tools and instruments required to perform its services under this Agreement.

11. ASSISTANCE BY UNITED

It is understood and agreed that the UNITED shall, to the extent reasonable and practicable, assist and cooperate with CONSULTANT in the performance of CONSULTANT's services hereunder. Such assistance does not include, in any manner, the exercise of professional judgment for which CONSULTANT is being retained herein. Such assistance and cooperation to be provided by UNITED as applicable includes, but shall not be limited to, providing right of access to work sites; providing material available from the UNITED's files such as maps, as-built drawings, records and operation and maintenance information; and rendering assistance in determining the location of existing facilities and improvements which may be affected by the Project. CONSULTANT shall otherwise be responsible for giving all notices and complying with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority relating to the work.

12. ADDITIONAL PROVISIONS

A. Examination of Records

CONSULTANT agrees that UNITED shall have access to and the right to examine at any reasonable time and on reasonable notice CONSULTANT's documents, papers and records, including accounting records, relating to its performance under this Agreement.

B. Notice

All notices or other official correspondence relating to contractual matters between the parties shall be made by depositing the same as first-class, postage paid mail addressed as follows:

To CONSULTANT:	Thomas O. Keller, P.E., G.E. GEI Consultants, Inc. 5901 Priestly Drive, Suite 301 Carlsbad, CA 92008
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To UNITED:	Maryam A. Bral, Ph.D., PE United Water Conservation District 1701 North Lombard Street, Suite 200 Oxnard, CA 93030
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or such other address as either party may designate hereinafter in writing delivered to the other party. All notices shall be agreed to have been received three (3) days after mailing.

C. No Waiver

No failure or delay by UNITED in asserting any of UNITED's rights and remedies as to any default of CONSULTANT shall operate as a waiver of the default, of any subsequent or other default by CONSULTANT, or of any of UNITED's rights or remedies. No such delay shall deprive UNITED of its right to institute and maintain any actions or proceedings which may be necessary to protect, assert or enforce any rights or remedies arising out of this Agreement or the performance of this Agreement.

D. Integration

This Agreement constitutes the entire agreement between the parties pertaining to the subject matter hereto, and supersedes all prior agreements, oral or written, and all prior or contemporaneous discussions or negotiations between the parties.

E. Modification

No alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the parties.

F. Rules of Interpretation

The terms of this Agreement have been negotiated by the parties and the language used in this Agreement shall be deemed to be the language chosen by the parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the party causing such instrument to be drafted, or in favor of the party receiving a particular benefit under this Agreement. No rule of strict construction shall be applied against any party to this Agreement.

G. Partial Invalidity

If any term, covenant, condition, or provision of this Agreement is found by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions hereof shall remain in full force and effect, and shall in no way be affected, impaired, or invalidated thereby.

H. Incorporation of Recitals and Exhibits

The foregoing recitals and exhibits are incorporated herein as though fully set forth.

I. California Law; Dispute Resolution; Venue

This Agreement shall be interpreted and construed pursuant to the laws of the State of California, regardless of whether this Agreement is executed by any party in another state or otherwise. If a dispute arises between the parties related to this Agreement or the breach thereof, the parties shall first attempt in good faith to settle the matter through discussion, and if unsuccessful may in their discretion mutually agree to mediate the dispute prior to filing a judicial action. The costs of a third party mediator, if utilized, shall be borne equally by the parties. If either party elects to file an action in court, such action shall be filed and heard in a court of competent jurisdiction in the County of Ventura.

J. Counterparts

This Agreement may be executed in multiple counterparts, a complete set of which shall be deemed to be an original and all of which together shall comprise but a single document. Signatures may be given via facsimile transmission and shall be deemed given as of the date of facsimile transmittal of the executed Agreement by one party to the other.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

UNITED WATER CONSERVATION DISTRICT

By _____
Mauricio E. Guardado, Jr., General Manager

GEI Consultants, Inc.

By Thomas O. Keller
Thomas O. Keller, Vice President

EXHIBIT “A” TO AGREEMENT FOR
PROFESSIONAL CONSULTING SERVICES

CONSULTANT shall provide professional engineering consultation services under this Agreement in accordance with work described in the attached **Scope of Work** and **Schedule of Charges**.

EXHIBIT “A” TO AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

CONSULTANT shall provide professional consultation services for the **Santa Felicia Dam Outlet Works Improvement Project – Final Design** in accordance with the following scope of work.

BACKGROUND

Santa Felicia Dam is owned and operated by United Water Conservation District (UWCD) and is under the jurisdiction of the Federal Energy Regulatory Commission (FERC) and California Department of Water Resources Division of Safety of Dams (DSOD).

The outlet works system of the dam consists of an intake tower with a single intake level, conduit beneath the dam, and downstream control facilities on the right (west) side of the dam. A small hydroelectric plant is located adjacent to the downstream control facility. The existing outlet works system needs to be replaced because of concerns for seismic stability of the intake tower and conduit through the dam, and to mitigate ongoing accumulation of sediment in the reservoir that will impact operation of the outlet works in the near future. The purpose of the outlet works improvement project is to replace the outlet works to address dam safety and operational concerns.

UWCD is also required by FERC and DSOD to improve the spillway of the dam to increase its capacity. The outlet works improvement project and spillway improvement project are collectively referred to as the “Santa Felicia Dam Safety Improvement Project” (Project). UWCD issued a Final Environmental Impact Report (Final EIR) for the Project in compliance with provisions of the California Environmental Quality Act in February 2019.

GEI Consultants, Inc. (GEI) has completed the following studies and designs to advance the outlet works improvement project:

- Phase 1 Study – A feasibility study was performed to evaluate alternatives to mitigate concerns with the existing outlet works. UWCD submitted the Phase 1 Study report to FERC and DSOD in April 2015.
- Phase 2 Study – A Phase 2 Study was performed to further evaluate alternatives to address outlet works concerns. A subsurface exploration program was performed as part of the Phase 2 Study to obtain geotechnical information to support conceptual design of outlet works replacement alternatives. The Phase 2 Study report describes alternatives for construction of a new outlet works system on the left (east) abutment of the dam and contains a conceptual design of a new outlet works configuration to

carry forward into the final design phase. UWCD submitted the Phase 2 Study report to FERC and DSOD in March 2019.

- 10% Design – A 10% design phase was performed to advance the outlet works improvement project. This design phase included a hydropower facility evaluation that led to UWCD’s decision to incorporate a small turbine system in the outlet works improvement project and to abandon the existing hydropower facility. UWCD submitted the 10% design report to FERC and DSOD in March 2020.
- 30% Design – A 30% design phase was performed to advance the outlet works improvement project. A subsurface exploration program was performed as part of the 30% design to obtain additional geotechnical information to support the final design. UWCD submitted the 30% design documents to FERC and DSOD in September 2021.
- 60% Design – A 60% design phase was performed to advance the outlet works improvement project. UWCD submitted the 60% design documents to FERC and DSOD in September 2022.
- 90% Design – A 90% design phase was performed to advance the outlet works improvement project. UWCD plans to submit the 90% design documents to FERC and DSOD in June 2023.

As required by FERC, UWCD convened an independent Board of Consultants (BOC) to oversee and assess the adequacy of the investigations, designs, and construction activities for the outlet works improvement project. Six BOC meetings have been held through completion of the 60% design phase. A seventh BOC meeting is scheduled for June 2023 to review the 90% design. The BOC prepared a report at the end of each meeting to present their conclusions and recommendations with regard to the ongoing design work.

The new outlet works facility will consist of the following four major components to be constructed on the left abutment of the dam:

- Sloping intake facility in the reservoir,
- Two water conveyance conduits in a tunnel through the left abutment,
- Downstream control facility (DCF), and
- Hydropower facility consisting of a small turbine located within the DCF.

The project will also include access road improvements, extension of the existing electrical power supply system to the new facilities, and a temporary trench from the DCF outlet channel to lower Piru Creek to allow for start-up testing of facilities. The existing outlet works will remain operational during construction of the outlet works improvements. Abandonment of the existing outlet works facilities and powerhouse will be part of the spillway improvement project.

The 90% design will be completed in June 2023. The remaining final design includes completion of 100% design, preparation of final bid documents, and bid phase support. The design of the outlet works improvements will evolve as additional analyses are performed, and additional input is received from UWCD, FERC, DSOD, and BOC.

The scope of work described below includes completion of final design of the outlet works improvement project, consisting of 100% design, preparation of final bid documents, and bid phase support.

SCOPE OF WORK

The scope of work for the final design of the outlet works improvement project is divided into the following three tasks:

- Task 1 – 100% Design
- Task 2 – Final Bid Documents
- Task 3 – Bid Phase Support

The scope of work for each task is presented in detail below. General assumptions related to the scope of work are contained after a description of Task 3.

Task 1 – 100% Design

Task 1.1 – Project Management and Coordination

This task includes management of the GEI team, contract administration, project controls, progress reporting, and coordination with UWCD, regulatory agencies, and other UWCD consultants. GEI's project manager will coordinate with UWCD throughout the duration of the work, with assistance as needed from task leads. This task includes the following activities:

- Management and supervision of the GEI design team.
- Coordination meetings of the GEI design team.
- Management, coordination, and evaluation of subconsultant services.
- Management of the project scope, schedule, and budget.
- Progress report included with submittal of monthly invoices.

Coordination and communications with UWCD includes one-hour bi-weekly progress meetings (virtual) to discuss project issues and progress.

GEI will participate in coordination meetings (virtual) with regulatory agencies and other UWCD consultants regarding relevant designs performed by others. This includes the design of a downstream release channel to connect the new concrete-lined outlet channel of the outlet works to lower Piru Creek.

GEI will assist UWCD in communications with FERC and DSOD to address issues related to process and functioning of the BOC, schedule of review submittals, and other matters related to the final design efforts. We have assumed that these communications will mainly be via phone and email.

Task 1.2 – 100% Analyses and Design

GEI will perform geotechnical, structural, hydraulic, mechanical, electrical, site civil, and hydropower analyses and design studies required to advance the design, plans, and specifications to a 100% level of completion. UWCD, BOC, FERC, and DSOD comments on the 90% analyses and design will be incorporated into the 100% design, as appropriate. The updated engineering design studies will be documented in the Design Report or separate TMs, as appropriate.

Task 1.3 – 100% Plan Drawings

GEI will update the plan drawings to bring them to a 100% level of completion. Updates will be based on the results of additional design studies and consider comments on the 90% design documents received from UWCD, FERC, DSOD, and BOC.

The drawings will be prepared in a current version of AutoCAD Civil 3D as standard 22x34-inch full size drawings, which are conveniently reducible to 11x17-inch half size drawings for reference. The plan drawings will be finalized in Task 2 to incorporate comments received from UWCD, FERC, DSOD, and BOC on the 100% submittal.

Task 1.4 – 100% Specifications

GEI will update the specifications to bring them to a 100% level of completion. Updates will be based on the results of additional design studies and consider comments on the 90% design documents received from UWCD, FERC, DSOD, and BOC.

Technical specifications will be submitted as individual Microsoft Word files. A compiled set of specifications will be submitted in searchable PDF format. The specifications will be finalized in Task 2 to incorporate comments received from UWCD, FERC, DSOD, and BOC on the 100% submittal.

Task 1.5 – 100% Geotechnical Baseline Report

GEI will update the GBR to bring it to a 100% level of completion. The update will consider comments on the 90% GBR received from UWCD, FERC, DSOD, and BOC.

This task includes finalization of the GBR to incorporate comments received from UWCD, FERC, DSOD, and BOC on the 100% submittal.

Task 1.6 – 100% Basis of Design Report and 100% Design Report

The Basis of Design Report (BDR) contains design criteria used for final design of the outlet works improvement project. GEI will update the BDR to bring it to a 100% level of completion. The update will consider comments on the 90% BDR received from UWCD, FERC, DSOD, and BOC.

The Design Report documents the design of facilities for the outlet works improvement project and summarizes the analyses that have been performed for the project. GEI will update the Design Report to bring it to a 100% level of completion. The update will consider comments on the 90% Design Report received from UWCD, FERC, DSOD, and BOC. Design Report will reference other documents pertinent to the design effort, such as plan drawings, specifications, and topic-specific technical memoranda and reports. TMs developed during the 100% design will be included as appendices to the 100% Design Report (or included in a separate volume).

This task includes finalization of the BDR and Design Report to incorporate comments received from UWCD, FERC, DSOD, and BOC on the 100% submittals.

Task 1.7 – 100% Constructability Evaluation Report and Cost Estimate

GEI will update the 90% Constructability Evaluation Report based on the 100% design information. The report will include an anticipated construction schedule (Microsoft Project format) based on an anticipated sequence of construction. This task includes finalization of the Constructability Report to incorporate comments received from UWCD, FERC, DSOD, and BOC on the 100% submittal.

Opinions of probable construction cost (OPCC) and opinions of probable project costs (OPPC) for the outlet works improvement project will be updated based on the 100% design information. The cost estimates will be updates of the AACE International Class 1 estimates developed during 90% design. The OPCC will be based on our evaluation of the major construction items appropriate to complete the work, and quantity estimates developed from the 100% design drawings. The cost estimate will be submitted as a separate TM.

Task 1.8 – Three-Dimensional Visualizations

GEI will update three-dimensional (3D) visualizations that depict the outlet works and spillway improvements. The visualizations will be developed using AutoCAD Civil 3D software (and Revit software by Autodesk as needed). The most current design drawings will be used to develop 3D models of the facilities.

Task 1.9 – Operations and Maintenance Manual

GEI will update the O&M Manual based on comments received from UWCD on the 90% O&M Manual.

Task 1.10 – 100% Reservoir Operations Plan During Construction

GEI will update the Reservoir Operations Plan (ROP) for the outlet works improvements construction period to bring it to a 100% level of completion. The update will consider comments on the 90% ROP received from UWCD, FERC, DSOD, and BOC.

Task 1.11 – Board of Consultants Meeting

There will be one meeting of the BOC near the completion of the 100% design phase (BOC Meeting No. 8), to be attended by UWCD, GEI, FERC, and DSOD. The 100% design documents to be submitted to the BOC, FERC, and DSOD for formal review are the following:

- 100% Basis of Design Report
- 100% Design Report and Appended TMs
- 100% Plan Drawings
- 100% Specifications
- 100% GBR
- 100% Constructability Evaluation Report
- Updated BOC Comment Tracking Form

GEI will perform the following in support of the 100% design BOC meeting: assist UWCD with development of a meeting agenda, prepare a list of questions for the BOC to respond to, compile and an electronic packet of information for review by meeting attendees, print two copies of the packet of information for UWCD use, develop a PowerPoint presentation to summarize key elements of the 100% design work, and attend the BOC meeting to make presentations and answer questions. We have assumed that this meeting will be held at UWCD's office in Ventura County over a two-day period and be attended by three GEI staff.

UWCD will handle scheduling of the meeting with the BOC and communications with the BOC, FERC, and DSOD relative to the meeting time and location.

Task 1.12 – Comment Response Memorandum

FERC, DSOD, and the BOC will submit comments on the 100% design documents submitted to them for review. GEI will update the comment tracking forms to document FERC, DSOD, and BOC comments, and provide responses to comments. GEI will update the Comment Response Memorandum (CRM). A Draft CRM will be submitted to UWCD for review and finalized to address UWCD comments on

GEI's responses. UWCD comments on the 100% design documents will be tracked and addressed separately.

Comments on the 100% design received from UWCD, FERC, DSOD, and BOC will be used to finalize reports and TMs as part of separate tasks, and to prepare final plan drawings and specifications for bidding as part of Task 2.

Task 1.13 – PFMA Support (Optional)

UWCD plans to engage a separate consultant to perform a potential failure modes analysis (PFMA) of the new outlet works facilities. As an optional task, GEI will participate in the PFMA to provide input on the design and operation of the new facilities. We have assumed that GEI will prepare for and participate in a three-day PFMA workshop at UWCD's office in Oxnard, CA. We have budgeted a total of 84 hours for the PFMA support effort.

Task 1.14 – Presentation to UWCD Board (Optional)

As an optional task, GEI will prepare for and participate in a workshop to present key elements of the 100% design to UWCD management/Board. For budgeting purposes, we have assumed that the workshop will occur over a one-day duration, will be held at UWCD's office, and be attended by two GEI staff (plus one other GEI staff as part of the spillway improvement project).

Task 2 – Final Bid Documents

Task 2.1 – General Bid Documents

GEI will finalize bid documents, including bidding forms, bid schedule, UWCD general provisions, applicable special provisions, and measurement and payment sections.

Task 2.2 – Plan Drawings

GEI will finalize all plan drawings for inclusion in the final bid documents. The drawings will be finalized based on comments received from UWCD, FERC, DSOD, and BOC on the 100% design drawings.

Task 2.3 – Specifications

GEI will finalize all technical specifications for inclusion in the construction contract documents. The specifications will be finalized based on comments received from UWCD, FERC, DSOD, and BOC on the 100% specifications.

Task 3 – Bid Phase Support

Task 3.1 – Pre-Bid Meeting

GEI will prepare for and attend a pre-bid meeting to provide an overview of the project and answer potential bidder's questions. We assume the pre-bid meeting will take place at the dam site and include a site tour for potential bidders.

Task 3.2 – Respond to RFIs and Questions

GEI will provide responses to bidder's questions and "Requests For Information" (RFIs) related to the project design.

Task 3.3 – Prepare Addenda

If requested by the UWCD, GEI will prepare addenda items as needed to clarify technical questions on the project design.

Task 3.4 – Develop Conformed Plans & Specifications

GEI will prepare a "conformed" set of plans and specifications that incorporates all addenda to the bid documents. Conformed plans and specifications are for reference only, and will include the following statement on each cover:

"The Conformed Plans and Specifications are intended to include revisions made to the Contract Documents by addenda. Conformed Plans and Specifications are for reference only and are not to be used as the Contract Documents. The United Water Conservation District does not guarantee the accuracy or completeness of the Conformed Plans and Specifications."

Additional Assumptions

The following additional assumptions were made in developing the scope of work and fee estimate for final design of the outlet works improvement project:

1. The configuration of outlet works improvement facilities will be as generally shown on the 90% design documents. Changes to this general configuration required by UWCD, BOC, or regulatory agencies may require modifications to the scope of work and design fee.
2. The BOC and regulatory agencies will not request extraordinary engineering analyses beyond typical geotechnical, structural, and hydraulic evaluations for an outlet works improvement project of this type.
3. All site survey information and site topography for design of facilities will be provided by others.

4. No additional field subsurface explorations will be required for design of facilities.
5. The allowable approach velocity for fish screen design is 0.8 feet per second.
6. A passive system for cleaning of fish screens will be allowed, such that fish screens can be brought to the surface for periodic cleaning.
7. Excavations for realignment of the existing access road near the intake facility will be allowed to extend beyond UWCD's property line.
8. The outlet works improvements will not include the Amiad system for quagga mussel filtration. If UWCD decides to implement the Amiad system, then changes to the design of the outlet works facilities will be required. These design changes would be performed as additional services at additional cost. Implementation of the Amiad system would likely require additional time to complete the design and construction of the outlet works improvement project.
9. The outlet works improvements do not include design of fish passage facilities.
10. The outlet works improvements do not include design of a permanent release channel improvements beyond the concrete-lined outlet channel of the downstream control facility.
11. All deliverables will be submitted in electronic format. Two hard copies of final documents will be submitted to UWCD.
12. Comments on the 90% design by reviewing entities will be sent to GEI within six calendar weeks after submission of the documents to UWCD for distribution. The intent is to have sufficient time to incorporate review comments in the 100% design.
13. Comments on the 100% design by reviewing entities will be sent to GEI within three calendar weeks after submission of the documents to UWCD for distribution. The intent is to have sufficient time to incorporate review comments in the bid documents to be sent by UWCD to FERC and DSOD for approval.

14. FERC and DSOD approval of the bid documents will be sent to UWCD within 30 calendar days after submission of the bid documents to FERC and DSOD by UWCD. The intent is to have sufficient time to incorporate review comments on the bid documents in the final bid documents to be used by UWCD to advertise for construction bids. We have assumed that any FERC and DSOD comments on the bid documents will be minor and editorial in nature.
15. All bid documents will be printed by UWCD.
16. The bid phase support budget is an allowance amount based on an anticipated level of effort. GEI will request an increase in the budget amount if additional effort is required to respond to Requests for Information, prepare addenda, or develop conformed plans and specifications.

Schedule

CONSULTANT shall provide professional consultation services for the Final Design for the Santa Felicia Dam Outlet Works Improvement Project in accordance with the schedule below.

Item	Approximate Date
Submit 100 Percent Design Packet for UWCD, FERC, DSOD, and BOC Review	10/30/2023
Participate in BOC Meeting No. 8	11/15-16/2023
Receive Comments on 100 Percent Design from All Entities	11/20/2023
Submit Bid Documents to UWCD for Submission to FERC and DSOD for Approval	1/19/2024
Receive FERC and DSOD Approval of Bid Documents	2/19/2024
Submit Final Bid Documents for Advertisement for Bids	3/8/2024
UWCD Advertise for Bids	3/11/2024
Complete Bid Phase Support	7/15/2024

UWCD = United Water Conservation District
FERC = Federal Energy Regulatory Commission
DSOD = California Division of Safety of Dams
BOC = Board of Consultants

Feed Estimate and Schedule of Charges

United Water Conservation District
Outlet Works Improvement Project
Design Fee Estimate - Final Design
GEI Consultants, Inc.

4/21/2023

Task	GEI Labor Hours	GEI Costs	Subconsultant Costs	Total Fee
Task 1 - 100% Design	2,516	\$611,128	\$80,000	\$691,128
Task 2 - Final Bid Documents	396	\$96,388	\$6,000	\$102,388
Task 3 - Bid Phase Support	288	\$74,464	\$0	\$74,464
TOTAL	3,200	\$781,980	\$86,000	\$867,980

<u>Personnel Category</u>	<u>Hourly Billing Rate</u> <u>\$ per hour</u>
Staff Professional – Grade 1	\$ 139
Staff Professional – Grade 2	\$ 152
Project Professional – Grade 3	\$ 167
Project Professional – Grade 4	\$ 187
Senior Professional – Grade 5	\$ 221
Senior Professional – Grade 6	\$ 251
Senior Professional – Grade 7	\$ 298
Senior Consultant – Grade 8	\$ 334

Senior Drafter and Designer	\$ 167
Drafter / Designer and Senior Technician	\$ 152
Field Professional	\$ 125
Technician, Word Processor, Administrative Staff	\$ 124
<u>Office Aide</u>	<u>\$ 97</u>

These rates are billed for both regular and overtime hours in all categories.

Rates will increase up to 5% annually, at GEI's option, for all contracts that extend beyond twelve (12) months after the date of the contract. Rates for Deposition and Testimony are increased 1.5 times.

OTHER PROJECT COSTS

Subconsultants, Subcontractors and Other Project Expenses - All costs for subconsultants, subcontractors and other project expenses will be billed at cost plus a 15% service charge. Examples of such expenses ordinarily charged to projects are subcontractors; subconsultants; chemical laboratory charges; rented or leased field and laboratory equipment; outside printing and reproduction; communications and mailing charges; reproduction expenses; shipping costs for samples and equipment; disposal of samples; rental vehicles; fares for travel on public carriers; special fees for insurance certificates, permits, licenses, etc.; fees for restoration of paving or land due to field exploration, etc.; state and local sales and use taxes and state taxes on GEI fees. The 15% service charge will not apply to GEI-owned equipment and vehicles or in-house reproduction expenses.

Billing Rates for Specialized Technical Computer Programs – Computer usage for specialized technical programs will be billed at flat rates established in the Agreement. Flow3D software modeling runs will be billed at \$2,000 per run.

Field and Laboratory Equipment Billing Rates – GEI-owned field and laboratory equipment such as pumps, sampling equipment, monitoring instrumentation, field density equipment, portable gas chromatographs, etc. will be billed at a daily, weekly, or monthly rate, as needed for the project. Expendable supplies are billed at a unit rate.

Transportation and Subsistence - Automobile expenses for GEI or employee owned cars will be reimbursed per the Travel Expenses provisions included in Exhibit B.

Tolls and parking charges will be billed directly. When required for a project, four-wheel drive vehicles owned by GEI or the employees will be billed at a daily rate appropriate for those vehicles. Per diem living costs for personnel on assignment away from their home office will be negotiated for each project.

EXHIBIT “B” TO AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

CONSULTANT shall adhere to the following **Guidelines for Expense Reimbursement**:

Incidental expenditures incurred by CONSULTANT in the course of performing work under this Agreement and submitted for reimbursement by UNITED shall comply with the following guidelines.

Receipts are required for all reimbursable expenses (with an exception for meals and lodging) and shall be furnished with the invoice. Reimbursable expenditures shall not be subject to mark-up. Only actual costs of expenditures within the limits presented below are eligible for reimbursement.

1. Reimbursable Expenditures

A. Travel Expenses

Expenses for airfare or other travel accommodations shall not exceed costs that would reasonably be expected for comparable economy or coach class accommodations.

Personal vehicles may be used when appropriate and mileage will be reimbursed at the standard Internal Revenue Service (IRS) business mileage rate (e.g., 65.5 cents per mile for calendar year 2023, but for a total cost no greater than the cost that would reasonably be expected for round trip economy or coach class airfare. With the exception of extenuating circumstances (e.g. transport of specialized equipment), mileage for any trip over 500 miles shall be reimbursed at a total cost no greater than would reasonably be expected for round trip economy or coach class airfare. Extenuating circumstances shall be pre-approved by UNITED.

Rental vehicle costs are reimbursable when justified by the nature of the trip. With the exception of extenuating circumstances (e.g. transport of more than 4 people or excessive cargo) the total expense for the rental vehicle shall not exceed a cost that would reasonably be expected for a standard class vehicle. Insurance for rental vehicles is not reimbursable and must be in accordance with all insurance requirements set forth in this Agreement.

B. Lodging

The cost of lodging incurred on approved CONSULTANT business trips is reimbursable. UNITED will reimburse lodging at the standard U.S. General Services Administration (GSA) rate for Ventura County (e.g., \$182.00 per night [excluding

taxes] for the months of October 2022 and January – September 2023). GSA rates are annually updated in October.

C. Meals

The cost of meals incurred on approved CONSULTANT Projects is reimbursable.

If UNITED is reimbursing the CONSULTANT for lodging, UNITED will reimburse for meals at the appropriate standard GSA rate for Ventura County (i.e., \$55.50 (or 75% of a daily rate) per day for first and last calendar day of PROJECT work, and \$74.00 per day for additional PROJECT work days for calendar year 2023.

If UNITED is not reimbursing the CONSULTANT for lodging, UNITED will not reimburse the CONSULTANT for meals.

D. Equipment

All reimbursable equipment must be purchased or rented at a reasonable cost, in accordance with industry standards.

E. Expendable Items

Items that are expendable (depleted) will not be returned to UNITED, as the items will be “used up” in the course of CONSULTANT’s work.

F. Non-Expendable Items

Items that are non-expendable (not depleted) will be returned to UNITED upon completion of CONSULTANT’s work.

EXHIBIT “C” TO AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

CONSULTANT shall procure and maintain for the duration of the Agreement, and for injuries that occur and claims which are made after the services herein are performed, insurance against claims or injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by CONSULTANT, its agents, representatives, or employees.

Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (occurrence Form CG 00 01 or its equivalent).
2. Insurance Services Office Form Number CA 00 01 covering Automobile Liability, Code 1 or its equivalent (any auto).
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Errors & Omissions Liability insurance appropriate to the CONSULTANT's profession. Architects' and engineers' coverage is to be endorsed to include contractual liability.
5. Valuable Document Insurance on all plans, specifications and other documents as may be required to protect UNITED in the amount of its full equity in such plans, specifications and other documents.

Minimum Limits of Insurance

CONSULTANT shall maintain limits no less than:

- | | |
|--|---|
| 1. General Liability:
Including operations, products and completed operations, as applicable. | \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. |
| 2. Automobile Liability: | \$1,000,000 per accident for bodily injury and property damage. |

3. Employer's Liability: **\$1,000,000** per accident for bodily injury or disease.
4. Errors & Omissions Liability: **\$1,000,000** per claim.
5. Valuable Document Insurance **Full Equity of all Documents**

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by UNITED. At the option of UNITED, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects UNITED, its directors, officers, officials, employees and agents; or CONSULTANT shall provide a financial guarantee satisfactory to UNITED guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Other Insurance Provisions

The commercial general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

6. For all policies required by this Agreement, UNITED and its directors, officers, officials, employees and volunteers are to be covered as additional named insureds as respects: liability arising out of work or operations performed by or on behalf of the CONSULTANT; or automobiles owned, leased, hired or borrowed by the CONSULTANT.
7. For any claims related to this Project, the CONSULTANT's insurance coverage shall be primary insurance as respects UNITED and its directors, officers, officials, employees and agents. Any insurance or self-insurance maintained by UNITED, its directors, officers, officials, employees or agents shall be excess of the CONSULTANT's insurance and shall not contribute with it.
8. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days prior written notice has been provided to UNITED (with the exception of ten (10) days for nonpayment of premium).

If General Liability, Contractors Pollution Liability and/or Asbestos Pollution Liability and/or Errors & Omissions coverages are written on a claims-made form:

9. The retroactive date must be shown, and must be before the date of the contract or the beginning of contract work.
10. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.

11. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, the CONSULTANT must purchase an extended period coverage for a minimum of five (5) years after completion of contract work.
12. A copy of the claims reporting requirements must be submitted to UNITED for review.
13. If the services involve lead-based paint or asbestos identification/ remediation, the Contractors Pollution Liability shall not contain lead-based paint or asbestos exclusions. If the services involve mold identification/ remediation, the Contractors Pollution Liability shall not contain a mold exclusion and the definition of "Pollution" shall include microbial matter including mold.

Acceptability of Insurers

Insurance is to be placed with insurers qualified to do business in the State of California with a current A.M. Best's rating of no less than A: VII, unless otherwise acceptable to UNITED. Exception may be made for the State Compensation Insurance Fund when not specifically rated.

Verification of Coverage

CONSULTANT shall furnish UNITED with original certificates and amendatory/ additional insured endorsements effecting coverage required by this clause. The endorsements should be on forms provided by UNITED or on other than UNITED's forms provided those endorsements conform to UNITED requirements. All certificates and endorsements are to be received and approved by UNITED before work commences. However, failure to do so shall not operate as a waiver of these insurance requirements. UNITED reserves the right to require complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these specifications at any time.

Waiver of Subrogation

CONSULTANT hereby agrees to waive subrogation, which any insurer of contractor may acquire from vendor by virtue of the payment of any loss. CONSULTANT agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the entity for all work performed by the CONSULTANT, its employees, agents and subcontractors.



Staff Report

To: Engineering and Operations Committee Members

Through: Mauricio E. Guardado Jr., General Manager

From: Maryam A. Bral, Chief Engineer
Craig A. Morgan, Engineering Manager
Robert J. Richardson, Senior Engineer
Michel Kadah, Engineer
Adrian Quiroz, Associate Engineer

Date: April 26, 2023 (May 4, 2023, meeting)

Agenda Item: 4.1 Monthly Engineering Department Report
Information item

Staff Recommendation:

The Committee will receive this summary report and presentation from the Engineering Department regarding its activities for the month of April 2023.

Discussion:

1. Santa Felicia Dam Safety Improvement Projects

- Spillway Improvement Project
 - Staff conducted bi-weekly progress meetings with GEI Consultants (GEI) to review and discuss the current design status. The preparation of 60% design analyses, plans and drawings, and specifications continued during this reporting period.
 - Outlet Works Improvement Project
 - The preparation of 90% design analyses, plans and drawings, and specifications continued during this reporting period. Staff reviewed the draft Field Reconnaissance of Slope Failures and Erosion Technical Memorandum and provided comments to GEI.
 - On April 17, Engineering and OPS staff attended the 90% design workshop for the outlet works improvement project. During this workshop, GEI presented design changes that occurred during the 90% phase and responded to Staff questions and feedback. On April 21, Staff received GEI proposal for completion of the final design and bid phase support.
 - Staff released addenda No. 1 and No. 2 to the Request for Qualification/Proposals (RFQ/P) for construction management and inspection services through BidNet to respond to questions received from prospective proposers and remove a task from the scope of work. Staff received three proposals on April 17, the proposals due date. All
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4.1 **Monthly Engineering Department Report** **Information Item**

- three proposals were reviewed by the selection panel and the proposals are scheduled to be interviewed by the selection panel in early May.
- Staff received and reviewed the California Department Safety of Dams (DSOD) comments on the 60% design reports on April 14, nearly seven months after the 60% design packet was submitted to the agency.
 - FERC License Amendment Application, NEPA Documentation and Section 7 Consultation
 - Engineering and Environmental Services Staff attended the bi-weekly permitting progress meetings with Catalyst Environmental Solutions (Catalyst) on April 14 and 28.
 - Staff continued preparing responses to the National Marine Fisheries Service (NMFS)'s comments on the draft BA. Staff reviewed the updates to the draft Biological Assessment (BA) report partially prepared by Catalyst and provided comments to Catalyst to be incorporated in the document.
 - Engineering and Environmental Services Staff attended two meetings with the Federal Energy Regulatory Commission (FERC) and NMFS on April 5 and April 26 to discuss February 21, 2022, NMFS comments of the draft BA.
 - Loan and Grant Applications
 - No updates to report.
 - Santa Felicia Dam Safety

On April 18, 2023, staff e-filed the 2023 SFD EAP Functional Exercise After-Action Report with FERC. The report was required to be e-filed no later than 60 days after the date of the exercise, which took place on February 23, 2023. On April 20, staff met with DWR via Microsoft Teams to present proposed operational variances that would help the District reduce risk during the SFD Outlet Works Improvement Project. Staff will meet with DWR on May 4, 2023, at District Headquarters to continue these discussions.
2. Condor Point Improvement Project
- No updates to report this period.
3. Freeman Diversion Expansion
- On April 11-12, Staff, Brian Wheeler, Larry Weber, Chris Caudill, USBR, NHC, NMFS (including legal counsel), CDFW (including legal counsel), Wishtoyo's legal counsel and Special Master Smith met at USBR's Denver Testing Center for witness testing of the 1:24 and 1:12 scale physical models of the Hardened Ramp fish passage alternative. Tests were run on the dubbed Mod 9 configuration that utilizes a flushing channel as was presented to the agencies in NHC's Design Development Report. This two-day visit culminated in the delivery of a summary report to Special Master Smith which was delivered to Judge Carter.
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4.1 **Monthly Engineering Department Report** **Information Item**

- Staff, USBR, the University of Iowa, Stantec and NHC participate in rotating weekly calls with NMFS and CDFW to provide updates on operational and stress testing of the physical model and to reach consensus on the next round of Hardened Ramp physical modeling that is scheduled for May 23-25.

4. Iron and Manganese Treatment Facility

- Meetings:
 - Weekly coordination meetings between staff and the District's construction manager (HDR, Inc.)
 - Weekly construction progress meetings hosted by HDR and attended by GSE Construction, Taft Electric, Kennedy Jenks Consultants (KJ) and staff.
 - GSE Construction has submitted approximately 364 out of a total of 396 submittal packages anticipated for the project. HDR and design engineer (KJ) have provided responses on approximately 363 submittal packages including a requirement to comply with the Buy American Act (BAA).
 - GSE Construction has submitted approximately 128 Requests for Information (RFIs) to date. HDR, KJ and the District have been providing responses.
 - Thirty-one (31) Change Orders (COs) have been partially or fully executed to date amounting to a net total of \$1,155,205.72. This represents approximately 12.4% of the original contract amount (\$9,342,900.00). Four (4) of these COs amounting to \$662,910.19 or 7.1% of the original contract amount are directly related to compliance with the BAA which is a federal grant requirement (the project was not originally bid with this requirement in place) and \$492,295.50 or 5.3% of the original contract amount is related to all other COs that have resulted in additions or modifications to the original scope of work.
 - District O&M Staff completed the construction of the 20" OF and 8" OF rip-rap aprons on February 22, 2023.
 - Final Draft Operations, Maintenance and Monitoring Plan (OMMP): document is under review by Staff and will be finalized and submitted to the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) by March 2023 before commencement of start-up and testing operations.
 - GSE Construction continued construction of the following 20" Spent Wash Water (SWW)
 - 24" Raw Water Pipeline (RAW)
 - 24" Raw Water (RAW) – flushing and disinfection
 - 24" Filtered Water (FW) Connection – pressure testing and corrections
 - Various underground sample lines
 - Various underground electrical conduits
 - Various work around Filter Drain Pump Station
 - Filter face piping encasement and concrete slab construction
 - Filter vessel platform handrails
 - Filter vessel cleaning and internals
-

4.1 Monthly Engineering Department Report Information Item

- Laboratory/Electrical/Blower Building
 - i. Exterior grouting and weather sealing
 - ii. Drywall
 - iii. Interior electrical
 - iv. Fire line risers and backwash service
- The tentative date for construction completion and implementation is June 21, 2023, (per CO No. 31 which was fully executed on March 21, 2023). A total of thirteen (13) inclement weather days have been counted. GSE's latest monthly schedule update on March 18, 2023, indicated that construction will be completed by July 21, 2023.
- April 19, Office of Local Defense Community Cooperation (OLDCC) staff visited the project site and attended the weekly construction progress meeting. The OLDCC provided \$4,230,133 in grant funding under the Defense Community Infrastructure Pilot (DCIP) Program. District staff provided a tour of the facilities under construction.

5. PTP Metering Improvement Project

- Total number of meters installed: 41 of 60 or 68.3% complete.
- An additional eleven (11) meter installations are planned by mid-2023 (Turnout Nos. 102, 103, 105, 109, 113, 114, 123, 132, 134, 158, 162).
- Easement acquisition completion: 28 of 40 obtained or 70% complete.
- An additional three (3) utility easement deeds have been signed by the property owner (Turnout Nos. 113, 114, 132) pending execution by the General Manager and recording by the County of Ventura.
- Battery and solar panel thefts are on the rise at some locations. Staff are considering measures to secure this equipment.
- The District is working to schedule an on-site meeting with the property owner and tenant at Turnout No. 154. The property owner previously submitted a letter declining to sign the easement deed.

6. PTP Recycled Water Connection – Laguna Road Pipeline Project

- On April 14, Staff reviewed proposal from Rincon Consultants, Inc. to perform environmental investigations and prepare the Initial Study as part of the CEQA analysis. Rincon revised their proposal based on comments provided by Staff. The Professional Service Agreement (PSA) with Rincon is anticipated to be executed by the end of April.
- Staff is currently reviewing a proposal from Kennedy Jenks (KJ) for development of the 60%, 90%, and final design, including support during bidding.
- Staff completed the Sustainable Groundwater Management (SGM) Grant quarterly Progress report and Invoice No. 3 covering the work completed between January 1 and March 31, 2023.

7. Rice Avenue Grade Separation Project and Impact on PTP

- No updates to report.
-

4.1 Monthly Engineering Department Report Information Item

8. State Water Project (SWP) Interconnection Pipeline Project

- Staff are planning to meet with Ventura Water Commission Staff in May to discuss detailed design and easements.

9. Extraction Barrier and Brackish Water Treatment Project

- Meetings:
 - Held weekly internal meetings between Engineering, Environmental, and Water Resources staff to discuss progress on agreements with the Navy (Memorandum of Agreement, Outgrant Easement), grants (SGM, GWGP), CEQA/NEPA documentation preparation, permitting agency engagement, discharge alternatives evaluation, coastal water quality sampling and groundwater flow modeling.
 - April 12, second NEPA/CEQA “Drumbeat” Meeting with District, ESA Consultants and Navy NEPA staff and Subject Matter Experts (SMEs). The Navy informed the group that the District’s consultant could prepare the NEPA documents under the supervision of the Navy. Additionally, the Navy informed that their legal counsel had drafted written responses to the permitting charrette held on Feb 28 and Mar 1.
 - March 25, the District and Navy staff held a meeting to finalize the draft Memorandum of Agreement to establish a UWCD-Navy partnership for the Phase 1B project.
 - April 17, held progress meeting with the Phase 1B project design team, Kennedy/Jenks Consultants.
 - April 17 and May 1, held progress meetings with the Phase 1B project CEQA and permitting team, ESA Consultants.
 - April 19, provided a presentation to Office of Local Defense Community Cooperation (OLDCC) staff of the EBB Water Treatment Project with Navy staff. Provided a site tour of the proposed Phase 1B project sites at NBVC Point Mugu. This included an introduction of OLDCC staff to NBVC’s Commander, Capt. Kimmach III.
- Agreements/Grants:
 - New Monitoring Wells: An amendment is needed to an existing license agreement that covers access, maintenance, operation and data collection for existing monitoring wells (22, A1, A-2, CM-1, CM-2, CM-1A, CM-6 and Q2). This amendment is pending site approval by the Navy.
 - The draft Memorandum of Agreement (MOA) has been prepared between UWCD and the Navy to develop a partnership for the Phase 1B project which has been reviewed by both parties’ legal counsels. This MOA will now be processed for final Navy review and signature.
 - The draft Letter of Request (LOR) initiating the Navy’s real estate process for an outgrant easement has been prepared for the Phase 1B project and will be submitted to the Navy for review and comment.
 - On March 6, 2023, the District received written notice from the State Water Resources Control Board (SWRCB) Division of Financial Assistance (DFA) that a grant award of \$8,449,062 was approved for the Phase 1B project. The District has been requesting a date for a kick-off meeting with the DFA.

4.1 Monthly Engineering Department Report Information Item

- Design:
 - On March 17, Kennedy/Jenks (K/J) Consultants submitted the draft Technical Memorandum (TM) No. 1 entitled “Discharge Options Evaluation.” This included input from ESA consultants on environmental and regulatory considerations. The District provided comments to K/J on April 11.
 - Kennedy/Jenks Consultants has provided a draft scope of work for surveying and geotechnical needs to be performed by one of the District’s on-call consultants. The District provided comments to K/J on the Geotech scope of work on April 21 and is currently reviewing the surveying scope of work.
- CEQA/NEPA/Permits:
 - ESA Consultants reviewed water quality data related to the Mugu Lagoon and reviewed general NPDES permit requirements. ESA Consultants is currently determining the appropriate permitting path for the proposed discharge options and developing a scope of work for data collection as required. A meeting request with the Los Angeles Regional Water Quality Control Board staff has been sent.
 - ESA Consultants is currently developing the CEQA Project Description for the Phase 1B project.
- Geotech/Hydrogeology:
 - April 24, proposals were received in response to the RFQ/P for “Planning, Design, Construction Oversight, and Related Support Services for up to Twenty (20) Phase 1 Groundwater Monitoring Wells as Part of Extraction Barrier and Brackish Water Treatment Project at Naval Base Ventura County-Point Mugu.” Proposals are currently under review by Water Resources and Engineering staff.

10. Asset Management/ CMMS System

- No updates to report.

11. Lake Piru Recreation Area – 2022 Pavement Maintenance Program

On April 24, Staff observed the asphalt repair completed by the asphalt contractor (Horizon). Staff requested Horizon repair ten (10) areas of distressed asphalt within Olive Grove Campground roads and areas adjacent to the park ranger’s office and the Marina parking lot. The repair work consists of removal of distressed asphalt, excavating approximately 8-inch of subsoil, placing geogrid mat and imported aggregate base, compacting subbase to at least 95%, and replacing the asphalt concrete layer (see Figures 3 and 4 below).

12. Other Topics, Meetings and Training

- On April 13, Maryam Bral, Robert Richardson, and Tessa Lenz toured the nearly one-year old Perris II Desalter in Menifee, CA which treats brackish groundwater in the San Jacinto Groundwater Basin. The facility has a capacity of 5.4 million gallons per day.
 - On April 12, Michel Kadah attended Ventura County Multi-Jurisdictional Hazard Mitigation Plan (VCMJHMP) Annual Maintenance meeting. The requirements of the VCMJHMP annual progress report were discussed during this meeting.
-

4.1 Monthly Engineering Department Report Information Item



Figure 1 - Maryam B. and Tessa L. on a tour at the Perris II Desalter (brine disposal shown in the background)



Figure 2 - Tour of the Perris II Desalter (Tessa L. shown near the primary feed pumps to the reverse osmosis treatment trains)



Figure 3 – Asphalt Repair at Lake Piru Recreation Area, April 24



Figure 4 – Asphalt Repair at Lake Piru Recreation Area, April 24



Staff Report

To: Engineering and Operations Committee Members

Through: Mauricio E. Guardado, Jr., General Manager
Anthony A. Emmert, Assistant General Manager

cc: Dr. Maryam Bral, Chief Engineer

From: Marissa Caringella, Environmental Services Manager

Date: April 26, 2023 (May 4, 2023, meeting)

Agenda Item: 4.2 Monthly Environmental Services Department Report
Information Item

Staff Recommendation:

The Committee will receive this staff report and presentation from the Environmental Services Department regarding its activities for the month of April 2023.

Discussion:

1. Santa Felicia Project Operations and Federal Energy Regulatory Commission (FERC) License Support

- Water Release Plan and Water Release and Ramping Rate Implementation Plan

Under the Water Release Plan and FERC license for the Santa Felicia Project, United Water Conservation District (United) is required to make certain water releases from the Santa Felicia Dam for steelhead habitat and migration, when specific triggers are met. Triggers for habitat water releases are based on cumulative rainfall within the water year. United evaluates whether the trigger is met on the first day of each month, between January and June. The table below presents trigger criteria for each month and minimum required releases if those triggers are met. Each month that the trigger is not met, the minimum required habitat water release is seven cubic feet per second (cfs). The measured cumulative rainfall (to date) for the current water year has exceeded all triggers for enhanced habitat water releases through October 1, 2023. The minimum required habitat water release for the month of May is 10 cfs.

4.2 Monthly Environmental Services Department Report Information Item

Habitat water release trigger date	Trigger criteria (total cumulative precipitation on trigger date)	Minimum required water release if trigger is met	2023 Measured cumulative precipitation	Actual minimum required habitat water release for month
January 1	4.80 inches	15 cfs	7.03 inches	15 cfs
February 1	8.10 inches	20 cfs	28.18 inches	20 cfs
March 1	12.00 inches	20 cfs	35.07 inches	20 cfs
April 1	14.90 inches	20 cfs	46.62 inches	20 cfs
May 1	16.30 inches	10 cfs	46.64 inches	10 cfs
June 1	17.50 inches	9 cfs*	TBD	9 cfs

*If triggered, the minimum required water release will remain at nine (9) cfs through October 1, at which time, minimum required water release will be seven (7) cfs through January 1 of next calendar year.

- Habitat Improvement Plan

On March 14, 2023, FERC issued a letter requesting that United file a proposed schedule for finalizing the Lower Piru Creek Habitat Improvement Plan (HIP) within 15 days. In response, on March 28, 2023, Environmental Services staff submitted a proposed schedule to provide the seventh iteration draft HIP to the National Marine Fisheries Service (NMFS) for review and approval by May 8, 2023, with the expectation of a standard 30-day review period for NMFS. United proposed to file the HIP, consultation history, and documentation of NMFS' approval with FERC for review and approval by July 31, 2023.

- Santa Felicia Fish Passage Pre-Implementation Studies

During the month of April, limited access was reestablished to pre-implementation study sites in middle Piru Creek on Piru Canyon Road. Cramer Fish Sciences technicians conducted additional scouting of road conditions and study sites. Currently, flows in middle Piru Creek remain too high to redeploy passive integrated transponder antenna or fyke trap equipment. Environmental Services staff continues to evaluate field conditions and assess if conducting additional project activities this season is feasible.

- Santa Felicia Dam Safety Improvement Project (SFDSIP)

On April 5, 2023, FERC issued a communications memorandum documenting an agency coordination meeting between FERC, NMFS, and United regarding agency comments on the SFDSIP draft Biological Assessment. On April 21, 2023, Environmental Services staff submitted a status update to FERC on the SFDSIP NMFS Endangered Species Act Section 7 Consultation actions and timeline based on FERC's guidance that an additional coordination meeting is

4.2 Monthly Environmental Services Department Report

Information Item

needed. To date, United has received comments from both FERC and NMFS on the draft Biological Assessment and is prepared to submit the response to comments and revised documents following the additional coordination meeting, or as advised by FERC.

2. Clean Water Act Permits for Emergency Activities at Lake Piru

On April 4, 2023, the U.S. Army Corps of Engineers issued a Regional General Permit (RGP 63) for emergency work at Reasoner Creek. On April 5, 2023, Environmental Services staff submitted an emergency notification to the California Department of Fish and Wildlife (CDFW), informing CDFW that work at Reasoner Creek had been initiated.

3. Freeman Diversion Operations

- Freeman Diversion Sediment Management

On April 20, 2023, United received approval from CDFW to relocate a cowbird trap that satisfies mitigation requirements associated with the Lake and Streambed Alteration Agreement for the Phase 1 Sediment Management Project. During the month of April, the trap consistently captured non-target species and was relocated approximately 0.6 miles upstream in an effort to minimize bycatch. Griffith Wildlife Biology will continue to operate the trap on behalf of United through June 30, 2023.

- Freeman Diversion Operations and Fish Passage Facility

The Freeman Diversion fish ladder and associated surveillance system have remained in operation since January 1, 2023. During the month of April, O&M staff conducted flushing operations to minimize sediment deposition in the facility. Environmental Services staff have supported O&M's operations and maintenance activities several times a week¹ by providing field support, conducting surveys of dewatered areas, setting up fish exclusion netting, providing on-site biological monitoring, and issuing agency notifications when appropriate. No *O. mykiss* has been observed during these activities.

During the month of April, the video surveillance monitoring system at the Freeman fish ladder has recorded 18 instances of fish passing upstream through the ladder. Environmental Services staff are reviewing the footage to determine the species, size, and life stage of each fish, and attempting to determine if there are multiple detections of individuals. Specifically, the monitoring system has recorded the following:

- Three passages on April 7, 2023
- Two passages on April 9, 2023
- Three passages on April 10, 2023
- One passage on April 14, 2023

¹ Environmental Services staff have assisted with O&M operations on April 5, 7, 8, 10, 12, 14, 17, 19, 21, 24, 26, and 28.

4.2 Monthly Environmental Services Department Report

Information Item

- Six passages on April 15, 2023
- One passage on April 18, 2023
- Two passages on April 20, 2023

4. Increased Importation of State Water Project (SWP) Water from Pyramid Lake to Lake Piru

On February 15, 2023, the Department of Water Resources (DWR), on behalf of United, submitted a request to FERC for a temporary variance to Article 52 of the South State Water Project FERC license (P-2426) to allow for an increase in SWP water imports from a maximum of 3,150 acre-feet (AF) per year to 25,000 AF via Pyramid Dam to Lake Piru during the 2023-2024 water year. Subsequently, FERC posted a public notice of the application for a variance to the license on March 13, 2023, opening a 30-day comment period. On March 23, 2023, FERC issued a request for additional information regarding consultation with the U.S. Fish and Wildlife Service (USFWS), CDFW, and U.S. Forest Service (USFS). On April 13, 2023, staff met with DWR, USFWS, CDFW, and USFS per the request from FERC and provided follow-up information to the agencies, thereby initiating a 30-day period during which the agencies can provide comments on the variance request. No other requests for information or public comments were received by the April 12, 2023, deadline. Pending receipt of comments specifically from USFWS, CDFW, and USFS, the FERC license variance is anticipated to be issued ahead of the SWP water delivery window of November 2023 – February 2024.

On April 5 and 19, 2023, Rincon Consultants biologists conducted arroyo toad surveys in middle Piru Creek. They confirmed the presence of arroyo toad tadpoles during the April 19 survey.

5. Quagga Mussel Management

On April 25, 2023, Environmental Services staff met with CDFW to discuss the 2022 Annual Report for the Quagga Mussel Monitoring and Control Plan. Additionally, Environmental Services staff scheduled a Technical Advisory Committee (TAC) meeting for May 23, 2023, which will be the first time the TAC has met since 2015. Confirmed attendees include staff from NMFS, DWR, and CDFW.

On April 3, 2023, Environmental Services staff began bi-weekly veliger sampling of the lower system in response to the spill at Lake Piru. Sites included in the bi-weekly veliger sampling include Freeman Moss Screen, El Rio, three PTP sites, and the Pleasant Valley Reservoir. Environmental Services staff continue to conduct all quagga monitoring activities on Lake Piru and lower Piru Creek with the exception of the spillway pool due to safety concerns regarding the ongoing spill.

6. Miscellaneous

- On April 12, 2023, Environmental Services field staff attended a Sontek Workshop to learn about new flow monitoring methods that may improve United's ability to conduct discharge measurements in varying conditions.

4.2 Monthly Environmental Services Department Report

Information Item

- On April 13, 2023, Tessa Lenz participated in a tour of Eastern Municipal Water District's Perris II Desalter Facilities in Menifee, CA.
- On April 18, 2023, Hannah Garcia-Wickstrum presented information on Lake Piru's Quagga Mussel Monitoring and Control Plan to Recreation staff during their Watercraft Inspection Training led by Pacific States Marine Fisheries Commission.
- On April 19, 2023, Marissa Caringella and Tessa Lenz joined the Engineering team on a tour of the proposed Extraction Barrier Brackish Water Treatment Project locations at U.S. Navy Base Point Mugu with staff from the Department of Defense and the Office of Local Defense Community Cooperation granting agency.
- On April 20, 2023, interviews were conducted for the part-time Environmental Services Field Assistant position. Staff has recommended a selection to the General Manager for consideration.
- On April 24, 2023, Jesse Mitchell joined the District as an Environmental Services Field Technician.
- In April 2023, Environmental Services staff began conducting point-count surveys at locations on the Santa Clara River near the Freeman Diversion and downstream as part of the USFWS led least Bell's vireo watershed wide point-count survey protocol.

Staff Report

To: Engineering and Operations Committee Members

Through: Mauricio Guardado, General Manager
Brian Collins, Chief Operations Officer

From: John Carman, Programs Supervisor

Date: April 27, 2023 (May 4, 2023, meeting)

Agenda Item: 4.3 Operations and Maintenance Department Update
Information Item

Staff Recommendation:

The Board will receive and file this staff report from the Operations and Maintenance department regarding its activities for the month of April.

TBD: Data not available at time of meeting packet posting; will make updates available at Committee meeting if data is available.

1. Water Releases, Diversions

- Lake Piru rose **TBD** feet in April to **TBD** acre-feet (AF) of storage.
- **TBD** AF of water was diverted by the Freeman Diversion facility in April.
- **TBD** AF of water was diverted to the Saticoy recharge basins in April (metered plus unmetered).
- **TBD** AF of surface water was delivered to the El Rio recharge basins in April.
- **TBD** AF of surface water was delivered to the PTP system in April.
- 0 AF of surface water was delivered to C customers in April.
- **TBD** AF of surface water was delivered to Pleasant Valley County Water District in April.

2. Major Facilities Update

- **Santa Felicia Dam**
 - On May 1, 2023, the lake level was 1055 and spilling via the spillway.
 - Habitat and migration water releases from the Santa Felicia Dam (SFD) were maintained between 20-200 cubic feet per second (cfs), for the month of April, as per the Water Release and Ramping Rate Implementation Plan for Lower Piru Creek.
 - District staff continues cleanup efforts associated with the January 9, 2023, storm activities.
 - Lake Piru reached 100% capacity and began spilling on April 16, 2023, staff is continually monitoring flows.
-

Agenda Item: 4.3 Monthly Operations and Maintenance Department Report
Information Item

- **Freeman Diversion, Saticoy, and El Rio Recharge Facilities**

- Flows at the Freeman Diversion averaged **TBD** cfs for the month of April, with **TBD** cfs of surface water being diverted on May 1, 2023.
- District staff operated the Freeman Diversion throughout the month including many nights of labor-intensive operations, harvesting Castaic release flood flows, recharging basins, and delivering surface water to the PTP and PV pipelines.
- In collaboration with Environmental Services, staff performed Freeman Diversion flushes and sediment removal every Mon/Wed/Fri the month of April.
- Noble basins were filled in preparation of potential temporary pilot pump/pipeline to Ferro Basin, traveling through Vineyard Ave culvert and through Vulcan/Harry's Berries properties.
- April 27, 2023, Air Pollution Control District performed an annual site inspection for El Rio Booster Plant and Saticoy Facilities.
- Static water levels (distance of water from the well pad to the water table):

	2023	2022	2021
Saticoy	18'	117'	125'
El Rio	92.6'	131.2'	122.3'
PTP	77'-106'	108'- 145'	111'-148'

- **Oxnard-Hueneme (OH) Delivery System**

- April 25, 2023, Disinfection Facility Post Chlorination injection was isolated for 9 hours for manifold modifications associated with new grant funded Iron and Manganese treatment plant.
- April 26, 2023, Variable Frequency Drives and Electrical room was deenergized for 8 hours as Contractor Taft Electric tied in the electrical feed supply for the new grant funded Iron and Manganese treatment plant.
- OH Booster Plant, the rebuilt Gas Engine #4 manifold and check-valve reinstalled, pressured tested and placed back in service.
- April 27, 2023, staff completed and submitted the State Water Resource Control Board Division of Drinking Water Electronic Annual Report.

- **Pleasant Valley County Water District (PVCWD)**

- PVCWD received United's surface water supply, surface supply from Conejo Creek Project and received some highly treated recycled water from the City of Oxnard's Advanced Water Purification Facility (AWPF).

- **Pumping Trough Pipeline (PTP)**

Agenda Item: 4.3 Monthly Operations and Maintenance Department Report
Information Item

- During the month of April, the PTP system demand was met with both PTP wells and surface water.
- **Instrumentation**
 - Staff installed, programed, and configured a new El Rio Disinfection Facility ammonia tank motor operated valve.
 - April 11, 2023, startup and commissioning of OH Well #12 was completed.
 - Instrumentation staff installed a new Dos Diego communications antenna and pole.
 - Staff replaced Endress Hauser magnetic meter batteries at Turnouts #133 and #104.
- **Lake Piru Water System**
 - All chlorine residuals and turbidity readings for the drinking water system were within proper ranges for the month of April.
 - The Piru Water Treatment Filtration plant is in service, lake turbidity levels remain at acceptable range for potable water production despite substantial rainfall runoff, and lake debris removal efforts.
 - Monthly pH, turbidity and coliform samples were obtained for Lake Piru, as part of the Long Term 2 Enhanced Surface Water Treatment Rule compliance monitoring.
 - April 24, 2023, Staff replaced SFD Treatment Plant Irrigation 150' flexible hose.

3. Operations and Maintenance Projects Update

- The Iron and Manganese grant funded project is progressing well at El Rio Booster Plant, projected completion date scheduled for June 30, 2023.

4. Other Operations and Maintenance Activities

- The Santa Felicia Dam Emergency Action Plan sirens located in Piru were exercised on April 7, 2023.
 - Facilitated tours at Santa Felicia Dam, Freeman Diversion, and Iron and Manganese facilities.
 - Contractor 805 Discing and Grading completed discing recharge basins at El Rio, Saticoy, Ferro, and Noble grounds.
 - On April 19, 2023, staff attended the Santa Paula Chamber of Commerce board meeting.
 - The monthly inspection of Santa Felicia Dam was performed.
 - Monthly bacteria samples were obtained for the PTP system.
 - Monthly meter readings were obtained for the OH, PTP, and PV Pipelines.
 - Completed and electronically transmitted the monthly OH Pipeline report to the State Water Resources Control Board Division of Drinking Water.
 - Static water levels were obtained for all El Rio, Saticoy, and PTP wells.
 - Weed abatement continued throughout the District.
-

Agenda Item: 4.3 Monthly Operations and Maintenance Department Report
Information Item

5. Safety and Training

- During the month of April, approximately 3100 hours of work, within the O&M department, were performed with 1 reportable accident.
- The online Target Safety assignment for April was “Water Industry Respiratory Protection.” Staff have been submitting their medical clearances in preparation for annual respirator fit testing. The fit testing for O&M staff has also been started. For staff operating in the field (e.g., at the Freeman Diversion), they will be fit tested in the field by the Risk and Safety Manager as the District’s fit testing equipment has the capability to perform in the field while minimizing operational impact. The safety meeting for staff will be held in early May due to major ongoing operations this month.
- Tailgate safety meetings were conducted at all individual O&M field locations and the topics included refresher training on equipment used at the various O&M locations.