



**FALLBROOK PUBLIC UTILITY DISTRICT
MEETING OF THE ENGINEERING & OPERATIONS COMMITTEE**

**WEDNESDAY, AUGUST 18, 2021
9:00 A.M.**

**FALLBROOK PUBLIC UTILITY DISTRICT
990 E. MISSION RD., FALLBROOK, CA 92028
PHONE: (760) 728-1125**

AGENDA

PURSUANT TO WAIVERS TO CERTAIN BROWN ACT PROVISIONS UNDER EXECUTIVE ORDERS ISSUED BY GOVERNOR NEWSOM RELATED TO THE COVID-19 STATE OF EMERGENCY THIS MEETING WILL BE CONDUCTED VIA WEB AND TELECONFERENCE USING THE BELOW INFORMATION. HOWEVER, MEMBERS OF THE PUBLIC MAY ALSO PARTICIPATE IN THIS MEETING BY ATTENDING IN PERSON AT THE DISTRICT OFFICE LOCATED AT 990 E. MISSION RD., FALLBROOK, CA 92028. MEMBERS OF THE PUBLIC WHO DO NOT WISH TO ATTEND IN PERSON ARE ENCOURAGED TO PARTICIPATE IN THE BOARD MEETING VIA WEB CONFERENCE USING THE BELOW CALL-IN AND WEBLINK INFORMATION.

Join Zoom Meeting

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AUDIO PASSCODE: 220496

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PUBLIC COMMENTS: Members of the public may submit public comments and comments on agenda items in one of the following ways:

SUBMIT COMMENTS BEFORE THE MEETING:

- By emailing to our Acting Board Secretary at mavisc@fpud.com
- By mailing to the District Offices at 990 E. Mission Rd., Fallbrook, CA 92028
- By depositing them in the District's Payment Drop Box located at 990 E. Mission Rd., Fallbrook, CA 92028

All comments submitted before the meeting by whatever means must be received at least 1 hour in advance of the meeting. All comments will be read to the Board during the appropriate portion of the meeting. Please keep any written comments to 3 minutes.

REMOTELY MAKE COMMENTS DURING THE MEETING: The Board President will inquire prior to Board discussion if there are any comments from the public on each item.

- Via Zoom Webinar go to the "Participants List," hover over your name and click on "raise hand." This will notify the moderator that you wish to speak during oral communication or during a specific item on the agenda.
- Via phone, you can raise your hand by pressing *9 to notify the moderator that you wish to speak during the current item.

MAKE IN-PERSON COMMENTS DURING THE MEETING: The Board President will inquire prior to Board discussion if there are any comments from the public on each item, at which time members of the public attending in person may make comments.

THESE PUBLIC COMMENT PROCEDURES SUPERSEDE THE DISTRICT'S STANDARD PUBLIC COMMENT POLICIES AND PROCEDURES TO THE CONTRARY.

If you have a disability and need an accommodation to participate in the meeting, please call the Board Secretary at (760) 999-2704 for assistance.

I. PRELIMINARY FUNCTIONS

CALL TO ORDER / ROLL CALL

PUBLIC COMMENT

II. ACTION / DISCUSSION----- (ITEMS A-E)

- A. AWARD OF WINTERHAVEN PIPELINE PHASE II REPLACEMENT PROJECT (JOB 3142)
- B. SMRCUP PROFESSIONAL SERVICES AGREEMENT AMENDMENT
- C. SMRCUP SCADA PROGRAMMING SERVICES AGREEMENT AMENDMENT
- D. AS-NEEDED SCADA SUPPORT CONTRACT AMENDMENT
- E. SOLAR POWERED FLOATING MIXER AT RED MOUNTAIN RESERVOIR

III. ADJOURNMENT OF MEETING

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DECLARATION OF POSTING

I, Mavis Canpinar, Acting Executive Assistant/Board Secretary of the Fallbrook Public Utility District, do hereby declare that I posted a copy of the foregoing agenda in the glass case at the entrance of the District Office located at 990 East Mission Road, Fallbrook, California, at least 72 hours prior to the meeting in accordance with Government Code § 54954.2.

I, Mavis Canpinar, further declare under penalty of perjury and under the laws of the State of California that the foregoing is true and correct.

8/12/21 _____
Dated / Fallbrook, CA

/s/Mavis Canpinar _____
Acting Executive Assistant/Board Secretary

M E M O

TO: Engineering & Operations Committee
FROM: Aaron Cook, Engineering Manager
DATE: August 18, 2021
SUBJECT: Award of Winter Haven Pipeline Phase II Replacement Project (Job 3142)

Description

Request for Board approval to award the Winter Haven Pipeline Phase II Replacement Project to the lowest responsive bidder.

Purpose

As part of the District's pipeline and valve replacement program, a priority list of replacement projects were identified based on high rates of past failures and age of the facilities. The Winter Haven Pipeline was selected as a priority due to leaks, age, and condition, including reduced flow capacities. District staff prepared the design package for the project and solicited for general contractor construction bids. The project consists of approximately 5,580 linear feet of 12-inch cement mortar lined and coated steel pipe and associated appurtenances. Bid opening was August 10, 2021. Sixteen bids were received. A summary of the bid results is below:

Company Name	Bid Amount
PK Mech.	\$1,600,000
Kay Const.	\$1,691,279
EJ Meyer	\$1,717,777
Palm Eng.	\$1,795,000
Downing Const.	\$1,832,435
Weka Const.	\$1,840,296
Genesis Const.	\$1,885,655
Gentry General	\$1,987,420
TK Const.	\$2,041,000
SRK Eng.	\$2,065,400
LB Civil Const.	\$2,082,200
TC Const.	\$2,085,000
Ortiz Corp.	\$2,158,000
TE Roberts	\$2,184,891

James W Fowler	\$2,197,000
Ahrens Mech.	\$2,477,000

PK Mechanical Systems, Inc. was the apparent lowest responsible bidder at \$1,600,000. PK Mechanical has not performed work for the District in the past, but has been in business for 20 years and has successfully completed several projects of a similar nature. In the recent past, the majority of their pipeline replacement projects have been for the City of San Diego.

Budgetary Impact

The approved capital budget for FY2021/22 included \$3,388,000 for pipeline replacement projects. \$1,953,000 of that was intended for the Winter Haven Pipeline Phase II Replacement Project. There will be some internal administration and construction management costs but the project is expected to be completed within budget.

Recommended Action

That the Committee recommend to the Board authorization of the Winter Haven Pipeline Phase II Replacement Project to the lowest responsible bidder.

M E M O

TO: Engineering & Operations Committee
FROM: Aaron Cook, Engineering Manager
DATE: August 18, 2021
SUBJECT: SMRCUP Professional Services Agreement Amendment

Description

Request for authorization of an amendment to the professional services agreement with the SMRCUP design engineer for services during construction.

Purpose

The District has engaged multiple contractors and consultants to facilitate the construction of the SMRCUP Facilities. As part of this effort, a Professional Services Agreement was entered into with Infrastructure Engineering Corporation (IEC) in November of 2014 for design of the project. Part of the scope of the agreement at the time included Bid Phase Services and Design Services During Construction (DSDC), which were anticipated to be completed in 2016-2018. In addition to time delays due to finalization of the SMRCUP agreement, the scope of the construction phase services at the time the agreement was initiated did not encompass the level of effort that has been required. DSDC includes attending regular construction progress meetings, reviewing materials submittals for compliance with the design specifications, responding to requests for information, executing design changes/reviewing proposed change orders when necessary, and start up trouble shooting. In September of 2020 the original DSDC funds from the 2014 agreement were exhausted, so the agreement was amended to enable the engineer to continue to work on the project. The amendment approved at that time was intended to cover only a portion of the work required to complete the project. Rather than attempt to anticipate the full and unknown level of effort needed to complete the rest of the project, the amendment provided funds to continue the work, but deliberately did not allocate the full budget, since the final necessary amount would become more clear closer to project completion. Now the construction is approximately 90% complete and the amended services agreement budget is nearly depleted. Start-up activities will begin this month and the project is expected to be complete by November 2021. Another agreement amendment is needed to utilize the design engineer's services during start-up. The scope changes are shown in the table on the following page:

Task	2014 Scope	Revised Scope September	Proposed Additional Revisions
Bid Phase	Respond to Questions and Prepare 3 Addendums	Responded to 343 Questions and Prepared 6 Addendums	N/A
DSDC – Respond to Requests for Information	200 RFIs	341 RFIs	Anticipate 410 Total (402 to date)
DSDC – Prepare Design Changes	20 Design Changes	25 Design Changes	Anticipate 32 Total (29 to date)
DSDC – Submittal Review	200 Submittals	480 Submittals	Anticipate 630 Total (604 to date)

As the table shows, the design engineer has completed more work than anticipated in an efficient manner. As of July 2021, the design engineer has responded to 402 RFIs, prepared 29 Design Changes, and reviewed 604 submittals, all exceeding the scoped quantity in the previous agreement amendment. While only a few more RFI responses and Submittal reviews are anticipated to complete the project, significant effort will be required from the design engineering team to complete the start-up phase of the project.

The revised scope provides \$262,941 of additional funds to cover the anticipated work remaining to complete the project. This includes a 10% contingency over the listed scope above to be able to cover unanticipated efforts. The agreement is written as a not-to-exceed contract, so if the contingency is ultimately not needed, it will not be expended.

In addition to the typical design services during construction and start-up, the design engineer recently completed a design change for adding a permanent back-up generator to the facility. As the District's plans have evolved to depend on the SMRCUP for more of its water supplies, the importance of maintaining service during a power outage has increased. The recent increased frequency of Public Safety Power Shutoff (PSPS) events has left portions of the District without power for days at a time multiple times per year. To avoid losing the ability to produce project water, District staff began seeking grant opportunities to fund the installation of a permanent 2,000 kW generator and automatic transfer switch electrical gear. The first potential grant opportunity encountered was a Federal Department of Defense, Defense Community Infrastructure Program grant. District staff prepared the grant application requesting \$1.2 Million and submitted it for review on July 12, 2021. Announcement of selected projects is anticipated before the end of August. The project plans, developed by the SMRCUP

design engineer, were included in the grant application. The cost to design and produce the plan was \$26,924.

The total combined professional services agreement for remaining start-up efforts and the back-up generator plans is \$289,866.

Budgetary Impact

No budgetary impact at this time. The additional \$289,866 brings the Professional Services Agreement with IEC to a total of \$5,002,423, which includes all work from planning and design to project start-up. The additional \$289,866 will be covered within the State Revolving Fund Loan Agreement Construction Management budget. A summary of the status of the loan agreement funds is shown in the table below:

Project Cost Table		
Type of Work	SRF Loan Budget	Actual Contracted to Date
A. Construction		
Filanc-Alberici as Joint Venture	\$ 54,398,232	\$ 54,398,232
GAC Equipment	\$ 1,260,493	\$ 1,260,493
GAC Yard Pipe	\$ 559,145	\$ 559,145
GAC Installation	\$ 3,200,000	\$ 3,064,873
Subtotal - A	\$ 59,417,870	\$ 59,282,743
B. Pre-urchased Material/Equipment	\$ -	
C. Land Purchase	\$ -	
D. Change Order Contingency	\$ 3,440,000	\$ 352,837
E. Allowances		
Construction Management*	\$ 4,161,308	\$ 3,745,014
Administration	\$ 70,000	\$ 115,715
Other Cost: SCADA Integration	\$ 400,000	\$ 341,618
Other Cost: GAC Design	\$ 811,333	\$ 811,333
Subtotal - E	\$ 5,442,641	\$ 5,013,680
TOTAL (Subtotal A+B+C+D+E)	\$ 68,300,511	\$ 64,649,260
*Includes IEC DSDC Amendments		

Recommended Action

That the Committee recommend to the Board a contract amendment with Infrastructure Engineering Corporation for a not to exceed amount of \$289,866 to continue providing Design Services During Construction for the Santa Margarita Conjunctive Use Project.

M E M O

TO: Engineering & Operations Committee
FROM: Aaron Cook, Engineering Manager
DATE: August 18, 2021
SUBJECT: SMRCUP SCADA Programming Services Agreement Amendment

Description

Request for authorization of an amendment to the professional services agreement with Arcadis U.S. Inc. to complete SCADA Programming for the SMRCUP.

Purpose

As part of the SMRCUP Facilities currently under construction, the instrumentation and control system is being programmed to operate the new treatment plant and pump stations. The project was designed by Infrastructure Engineering Corporation (IEC) and is being constructed by Joint Venture J.R. Filanc and Alberici. The necessary controls hardware and software were specified in the design, and the contractor has procured the equipment as part of the construction contract. The development and implementation of the SCADA system is to be completed by the District. To complete that task, an agreement with Zak Controls was authorized in February of 2020. The principal engineer, Jon Murphy, has been working on the project since that time and recently joined Arcadis. In order to facilitate a seamless continuation of work on the start-up of the new treatment plant, it is critical that Jon continue on the project. The District coincidentally authorized an agreement with Arcadis U.S. Inc. in March of 2021 to assist with the preparation of the Operations Plan for the project. Staff recommend ending the existing agreement with Zak Controls and amending the existing agreement with Arcadis to include the remaining SCADA programming effort so that Jon Murphy can continue to work on the project through start-up.

Budgetary Impact

No budgetary impact. The cost for SCADA Programming services was included in the State Revolving Fund Loan. The original contract with Zak Controls was for \$301,738 and was amended to \$341,618 based on changes implemented during construction. \$95,656.40 of that contract has been expensed to date with Zak Controls, and no more work will be performed under that contract. The \$245,961.60 remaining will be amended into the existing services agreement with Arcadis. There is no additional cost to the District.

Recommended Action

That the Committee recommend to the Board a contract amendment with Arcadis U.S. Inc. for a not to exceed amount of \$245,961.60 to continue providing SCADA Programming Services for the Santa Margarita River Conjunctive Use Project.

M E M O

TO: Engineering & Operations Committee
FROM: Jason Cavender, Operations Manager
DATE: August 18, 2021
SUBJECT: As-needed SCADA Support Contract Amendment

Purpose

Request for Board approval to amend the professional services agreement with SCADA Integrations to provide additional as-needed SCADA and instrumentation support.

Purpose

The District utilizes a significant amount of remote monitoring and control of water and wastewater facilities in order to optimize operations and reduce operational labor requirements. Although District staff has been capable of managing the bulk of the workload, some specialized troubleshooting and programming support is necessary to develop and maintain these systems. SCADA Integrations has been providing as-needed support to the District, for these specific well-defined tasks, since 2016. The current FY 21/22 as-needed contract is for a not-to-exceed amount of \$37,500.

Due to both our SCADA Supervisor and our Electrical/Instrumentation Technician finding other employment closer to home, the District will need to rely heavily on outside support to complete several key projects, most notably the Santa Margarita Groundwater Treatment Plant until these vacant positions can be filled. As SCADA Integrations is intimately familiar with the District's SCADA system, they are very capable of supporting the District to see these projects through. Staff estimates that an additional \$37,500 will be needed to complete critical projects, and to provide training to newly hired staff.

Budgetary Impact

The approved capital budget for FY 2021/22 includes \$37,500 for SCADA and instrumentation support. The additional \$37,500 will be offset by a reduction in labor costs due to temporary vacancies in both the SCADA Supervisor and Electrical/Instrumentation Technician positions.

Recommended Action

That the Committee recommends to the Board the authorization of an additional 37,500 to the annual as-needed support contract with SCADA Integrations, for a combined total of \$70,000.

M E M O

TO: Engineering & Operations Committee
FROM: Jason Cavender, Operations Manager
DATE: August 18, 2021
SUBJECT: Solar Powered Floating Mixer at Red Mountain Reservoir

Purpose

Request for Board for approval of award to IXOM Watercare Inc. for the purchase and installation of a Solar Bee Mixing unit at Red Mountain Reservoir.

Purpose

Red Mountain is an open reservoir with a maximum capacity of 435 million gallons, and is used to store treated water purchased from the San Diego County Water Authority. There are several challenges associated with the operation of a large capacity treated reservoir, the most critical of which is maintaining adequate water quality.

In 2017 and 2018, largely due to low demand, the Operations staff was not able to cycle the reservoir as effectively as was done in past years. As a result, the reservoir stratified, and the water quality experienced degradation in the bottom fifteen feet. To adequately treat this water the UV Disinfection Plant was operated near maximum capacity. In early 2019, to mitigate this issue, a Solarbee mixer was installed near the inlet/outlet structure, and the reservoir has not experience a stratification event since.

During some years, the operation of the Santa Margarita Groundwater Treatment Plant will create additional water quality challenges. The increased volume of stored water in Red Mountain will again limit our ability to adequately cycle the Reservoir, creating zones of stratification. The additional of a second mixer will reduce the impact of stratification, improve water quality, and will provide several other key benefits.

1. Over time, suspended solids settle out in Red Mountain Reservoir, creating several feet of sediment on the floor of the reservoir. To maintain water quality the sediment must be removed periodically, which requires Red Mountain to be emptied. As the bottom 24 feet, or 65 million gallons, are at an elevation that does not provide adequate pressure to the system, this water must be discharged into the nearby creek. Draining and cleaning the reservoir is a costly and time consuming project. A solar mixer would minimize the settling out process and eliminate the need to drain the reservoir for cleaning.

2. As sediment builds on the floor of the reservoir, the water quality degrades. To meet water quality standards the UV reactors must increase power output, which increases electrical usage. By improving the water quality, the District will see a decrease in electrical cost.

Although there are several tank mixing systems available, Red Mountain Reservoir has several unique characteristics that prevent their use.

1. Other than solar, there is no power source readily available.
2. Maintaining a floor mounted mixer would be labor intensive.
3. Standard tank mixers do not have sufficient pumping capacity to adequately mix a reservoir the size of Red Mountain.

Staff has determined that there is only one product capable of meeting the District's needs. The Solarbee unit is a floating solar powered mixer capable of mixing at a rate of 5,000 gallons per minute. This unit is easy to maintain, solar powered, and provides enough mixing to minimize stratification and sedimentation buildup.

Budgetary Impact

The approved capital budget for FY 2021/22 included \$90,000 for a solar powered mixer.

Recommended Action

That the Committee recommends to the Board the authorization of \$71,323 to IXOM Watercare Inc. for the purchase and installation of a solar powered mixer.